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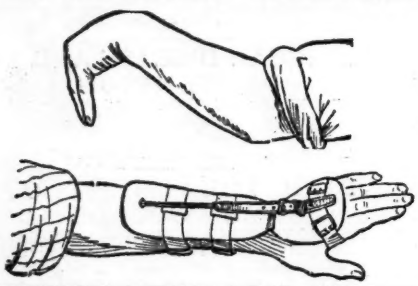

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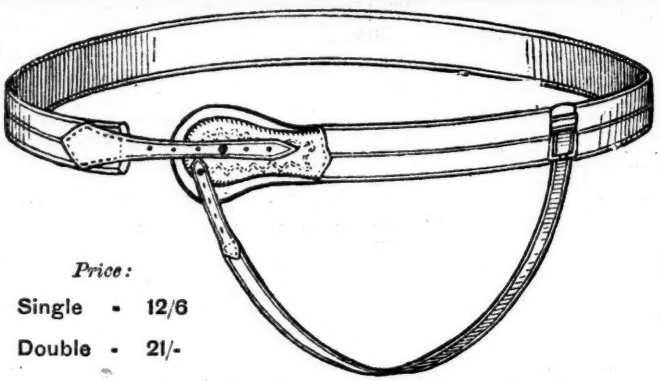

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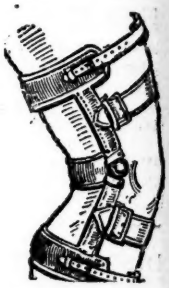

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September 7th. Another fit, more intense and violent than any previous one. Lasted an hour and a quarter. Strugglings very violent, requiring control from four orderlies and convalescent patients. Quite unconscious the whole time. Did not bite tongue. Did not pass urine or motion.

September 14th. No more fits, but headache very violent at times. Getting depressed and miserable. Keeps to bed and sheltered parts of the ward.

September 15th. A still more severe fit, lasting an hour and a half. Very fierce strugglings. Quite unconscious. Followed by headache even more severe than before.

Operation.

Lumbar puncture showed great increase of cerebro-spinal fluid tension and amount. Fluid otherwise normal. Operation advised, and the idea readily accepted by patient, who was willing to undergo any treatment for the relief of headache and fits. I had watched this man daily since his admission and had ordered all available narcotics, with but the slightest momentary effect. For three days previous to operation I kept him under the influence of morphine in order to cut short the possible development of further fits, the result of the operation being obviously more hopeful if performed during a more or less quiescent period. The diagnosis appeared reasonable that, as the result of heat-stroke, the patient was suffering from cerebral oedema, with great excess of cerebro-spinal fluid.

On September 21st I carried out a right-sided subtemporal decompression, choosing that side on the ground that the retinal veins were the more engorged in the right eye. The bone was cut away so as to leave a gap of about two and a half inches in the antero-posterior direction and one and a half inches in the vertical. The dura was opened the full extent by crucial incision. Cerebro-spinal fluid spurted out when the dura was opened, the arachnoid wept copiously, and fluid ran away in rivulets—a typical picture of cerebral oedema.

After-History.

With the exception of some neuralgia and pain in the right face, a common result after subtemporal decompression, due in part to the interference with the temporal muscle, the patient was practically relieved of headache the following day. There was no headache, except of a very mild character, and no fits developed from the day of operation till his arrival in England three months later. The further history of the case is scheduled towards the end of this paper.

Shortly afterwards other cases were admitted to hospital with similar symptoms, some of a mild character, others very severe. The general pressure symptoms were more or less identical, merely varying in degree. There were eleven serious cases, nine with epileptiform convulsions; seven were subjected to operation, and four refused surgical treatment. All cases were watched for an average period of three months, and previous to operation all other known remedies were given full trial.

CASE II.

Fits began at the age of 12. Joined in 1914, but was sent home because of the fits. Rejoined in 1916 and was sent to India. Later, when in Mesopotamia, the fits recurred and became much worse than before, the result, as attributed, of an attack of heat-stroke. The fits were associated with giddiness, headache, and vomiting; they were preceded by attacks of blindness or giddiness, and sometimes lasted forty-five minutes; consciousness was not always lost. When in hospital he had fits on several occasions, three or four days usually intervening. All were very severe and headache was more or less continuous.

Subtemporal decompression, right; much fluid escaped on opening the dura, the arachnoid weeping, etc. No trace of headache, and neither fits nor vomiting subsequently. (Further history below.)

CASE III.

Patient, aged 19, had suffered from fits for many years; infrequent occurrence, but much worse after service in Mesopotamia. Many fits when in hospital, all typically epileptiform. Headache very severe. Subtemporal decompression brought about great relief, and during the two months' residence in hospital after operation the fits became ever less intense and less frequent. (Further history below.)

CASE IV.

Said to have enjoyed excellent health till December, 1916, when, whilst carrying rations during the heat of the day in Mesopotamia, he had a fit, diagnosed as heat-stroke. Mentality poor, headache more or less continuous and very severe at times. Several fits after admission, with loss of consciousness and followed by severe headache. The fits tended to become more severe, the most serious lasted one to two hours, fit following fit, with subsequent prostration. Subtemporal decompression revealed a typical condition of cerebral oedema. After the operation, quite free from headache and fits till leaving hospital. (Further history below.)

CASE V.

Patient had an attack of meningitis when 14 years of age, since when he had suffered from periodic attacks of headache. After service in Mesopotamia he became very much worse. Headaches were very severe, and he declared that his life was not worth living. After several weeks of treatment, he accepted readily the chance of improvement by operation. Subtemporal decompression showed a condition of typical cerebral oedema and, after the operation, he rapidly improved. Mentality good when discharged, and there were neither headaches nor fits. He said that he was free from headaches and happy, the first time since he was 15 years of age. (Further history below.)

CASE VI.

In this case there was a history of injury to the head some years previously. For some time he had suffered from periodic headaches and vomiting, both of which became much worse in Mesopotamia. Subtemporal decompression showed typical cerebral oedema. He was completely relieved. (Further history below.)

CASE VII.

Quite well in every respect till heat-stroke in Mesopotamia, falling down in the heat of the day in a fit which lasted twenty minutes. A second fit, of three hours' duration, six months later. Subsequently an average of three fits a month. Then invalided to India. During stay in hospital fits became very much more frequent and more severe. Consciousness lost on most occasions. Fits lasted sometimes two to three hours—a succession of fits. Subtemporal decompression showed typical cerebral oedema. No fits afterwards and headache almost entirely relieved. (Further history below.)

As a contrast to these seven cases, I have the notes of four who refused operation. They presented similar symptoms; both fits and headache became more severe and more persistent as the days passed by. I urged operation, guided by my previous experience, but all surgical remedies were refused. The four patients were eventually discharged in a rather pitiable condition.

Reasons for Subtemporal Decompression for Cerebral Oedema.

The drainage of this excess cerebro-spinal fluid, the result of deficient absorption into the cerebral venous system, by means of trephining and dural opening, permits of the escape of the fluid from the confined space in which it is pent up and allows of its coming into contact with new tissues where it can be absorbed. The primary cause (? temporary or permanent changes in the walls of the cerebral veins) is beyond the scope of surgery, but, by the relief of the general pressure symptoms, time and opportunity are afforded for some recovery on the part of the defective venous system, and, if that does not happen, a secondary path of escape has been made for the superabundant fluid.

All the cases that came to operation, both in India and since, recovered, so that I have not yet had the opportunity of putting my views to the test by obtaining microscopic evidence as to pathological changes in the cerebral veins. And, so far as I can see, there should be considerable difficulty in proving my point—there should be no mortality connected with the operation.

Lumbar Puncture.

Lumbar puncture, however frequently repeated, cannot be expected to bring about more than a temporary improvement at the best. This was my experience in several cases. More radical measures are required for the relief of the accumulating fluid.

In addition, there are two points concerned with lumbar puncture which are disconcerting. Firstly, I found that lumbar puncture sometimes made the patients worse, in spite of the fact that a good deal of fluid was withdrawn—one to two test tubes full; and, secondly, lumbar puncture sometimes failed to show any excess at all, but rather the reverse. In one of my last cases, four punctures carried out immediately previous to operation showed a great diminution in the amount of cerebro-spinal fluid; and, in the operation performed immediately afterwards, the opening of the dura showed a most typical condition of cerebral oedema, with very great excess of fluid. Possibly some swelling of the membranes in the region of the fourth ventricle, together with considerable local excess of fluid, closes the normal communication between the cerebral and spinal arachnoid system. Consequently, although lumbar puncture should be carried out in every case, the absence of fluid excess does not by any means negative the diagnosis of cerebral oedema. The general clinical symptoms are a far surer guide.

Indications for Operation.

Operation is indicated in severe and intractable headache, with or without epileptiform convulsions, whether due to heat-stroke, cerebral malaria, shell shock, or neurasthenia. It is obvious that in every case all

ordinary remedies, including prolonged rest in bed (the most important of all), should receive a fair trial, but in view of the injurious effect produced on the cortical cells by prolonged soaking in superfluous fluid, operative measures should not be unduly delayed. I would suggest three months as a fair probationary period.

Region Chosen for Decompression.

The temporal region offers the most suitable site for decompression. The operation is carried out over a silent area of the brain; drainage is conducted at the most dependent part of the brain; the scar is hidden subsequently by the hairy scalp; the bone defect is in a reasonably safe situation, and the operation involves no special risk when carried out by one possessing reasonable skill in head operations. The right or left side is chosen according to the distribution of the headache, but if there is no such localization the right side should be selected to avoid any possibility of disturbing the functions of the motor speech area.

The Opening in the Skull.

The trephine opening should be made low down, immediately above the ear, in the angle between the anterior and posterior branches of the middle meningeal artery. The opening is enlarged mainly in the anterior and posterior directions and downwards towards the base of the cerebral fossa. The bone is cut away so as to leave an aperture not less than two inches in the antero-posterior direction, one and a half in the vertical. The size, however, varies—the more severe the symptoms the larger the opening, and vice versa.

The dura is opened in every case by crucial or other incision. The intradural tension is *plus*, and in consequence the dural incision must be carried out with caution to avoid damage to the underlying cerebral vessels. The temporal muscle, turned down previous to trephining, is sewn into position at the end of the operation. Drainage to the surface should never be employed.

After-Treatment.

The patients should be sat up in bed as soon as possible. I advise small doses of morphine for one or two days following the operation, then bromides for a week or two; they should be gradually discontinued. Patients should be kept quiet in hospital for one month and then sent for prolonged convalescence at some quiet place with open-air treatment and no worries.

Plating the Gap in the Skull.

The situation of the opening, its muscular covering and subsequent protection with the fibrous tissue that develops later, usually render subsequent plating unnecessary. In some cases, however, especially when an extra large opening has been made, protection with a plate may be required. This can be done after the lapse of six months or so.

RESULTS OF SUBTEMPORAL DECOMPRESSION FOR CEREBRAL OEDEMA.

Immediate.

In the seven cases submitted to operation immediate benefit resulted. In some the patients were quite free from headache the day after the operation, the first time for many months. In other cases two or three days elapsed before real improvement occurred. In all cases, however, headache of any severity was a thing of the past. Minor attacks occurred now and then, but nothing compared to the previous severity. As regards the epileptiform convulsions, in spite of the fact that in some cases the fits had been not only numerous and severe but also dated back for some months, and even longer, there were no further fits of any sort (except in Case III) from the time of the operation till the discharge of the patient from hospital, an average period of two months. The mental condition improved in direct ratio; patients previously miserable and depressed became bright and cheerful, eager to get home. All other pressure symptoms disappeared in direct proportion.

Remote.

The later histories of these seven men confirm, with certain modifications, the early results as expressed above. All seven cases arrived home, and communications have been received carrying on the history of the case down to eighteen months subsequent to the operation, thus giving a reasonable guide as to the result of the measures carried out.

CASE I.—"I am glad to say that I am fairly all right so long as I keep quiet. I often get a head, but nothing like the old days in India. Have only had about four attacks since arriving home."

CASE II.—"Sometimes I am well in my head and sometimes I am so bad that I cannot do anything. The fits I have not had any more."

CASE III.—"I am very well sometimes, at others I cannot do anything. I have had no more fits."

CASE IV.—"I am getting on quite well, and my master is very pleased with my work. I hope you are in the best of health, as it leaves me at present."

CASE V.—"I am thankful I am able to give you a good report. My head gives me no trouble whatever beyond an occasional headache, which all of us are liable to at times."

CASE VI.—"I am keeping fairly well. I am getting pains and sickness now and then in dull weather. I get dull headaches, but nothing to worry about."

CASE VII.—"Up to the time of writing I have had one or two attacks, the last in August of last year, since when I have been in the best of health."

The first three cases are less satisfactory than Cases IV to VII. This, I believe, is due in the main to the experience gained in the earlier cases, as to points in the operative method, more especially in reference to the size and position of the decompression opening in the bone. But, taking all things into consideration, these results may be regarded as highly satisfactory.

Finally I would add that I have carried out the same operative procedures on three cases recently for chronic headache the result of slight gunshot wounds, being blown up, buried, etc. Two of these men were operated on very recently. In both the early result is eminently satisfactory. One man, the last case, said to me this morning: "My headache is all gone, and I feel a treat." This man had been blown up and buried, and had suffered from headache for five months.

REMOVAL OF WORM (FILARIA LOA) FROM THE EYE.

BY LIEUT.-COLONEL R. H. ELLIOT, I.M.S.(RET.).

MR. T. W., of the West African Civil Service, was sent to me by Dr. C. W. Daniels on April 2nd, 1918, suffering from a worm under the conjunctiva of the right eye. The patient is highly intelligent and educated. In addition he is an excellent observer, and has taken a very close interest in the evolution of his case, with the result that he has been able to contribute some new and interesting items of information on the subject of this form of filariasis.

History.

He believes that he contracted the disease in Benin City, where he was resident for eleven months (from June, 1909, to May, 1910). He knows of two other Europeans who contracted it whilst there with him, and he considers the district the commonest endemic centre of the disease in West Africa. He has discussed the disease with Sir Patrick Manson, Dr. Daniels, and other well-known authorities, and has taken considerable interest in the flies responsible. He recognized *Chrysops dimidiata*, figured on page 783 of Manson's *Tropical Diseases* (sixth edition), as a very common pest there; he states that this fly is of a yellow colour, and that it settles on its victim "in a very sly and unobtrusive manner, in this resembling the tsetse fly."

The first signs of infection he exhibited were calabar swellings in the hands and feet; these began ten months after his arrival in Benin district, and have continued off and on up to the present time, but latterly they have only attacked the hands. He describes them as very painful, and complains bitterly of "the tightness of the skin over them." The first really bad one of these attacks was thirteen months after his arrival in Benin; the previous ones had been quite slight.

His next trouble was the appearance of the worms in and about the eyes. This commenced very shortly after he first noticed the swellings, and has continued off and

on throughout the whole of the past eight years. Although he has felt the worms moving about in various parts of his body, they have occasioned him comparatively little inconvenience, except when they have invaded the neighbourhood of the eye and ear. In the former situation they cause great irritation, which becomes intense when they find their way under the conjunctiva. The combination of itching, pain, and irritation caused by their movements he describes as "simply maddening." He has learnt to obtain sleep during these attacks by instilling cocaine into the eye, and he believes that, apart from the anaesthesia of the conjunctiva, an important accessory action is the toxic influence of the drug on the parasite, causing it to become sluggish and abate its movements.

FIG. 1.—Adult female *Filaria loa*, 36.5 mm. long; the mouth end is to the left; magnified (× 2).

In this connexion he quotes an interesting and suggestive experience, which might possibly be followed up with advantage by surgeons. On one occasion, on embarking for England on leave, he consulted the ship's surgeon on account of a *Filaria loa* in his upper lid; full of enthusiasm, the surgeon gave a subcutaneous injection of cocaine, and completely lost the worm in the resulting oedema, though he cut down upon it. When the swelling subsided the patient felt a hard linear mass lying in the position the worm had occupied at the time. Subsequently, while he was home on leave, "a cyst developed at this spot, and was incised and scraped out by a surgeon." He does not think any effort was made to ascertain the contents of the cyst, but he is absolutely satisfied in his own mind that the hard linear mass he felt was the dead worm, and that it had been killed by the cocaine injection. The suggestion seems likely to be correct, and is supported by the writer's experience with cocaine to be mentioned later in the paper. Mr. T. W. has had worms removed from his eyes on four previous occasions —namely, once in 1911, twice in 1914, and once in 1917.

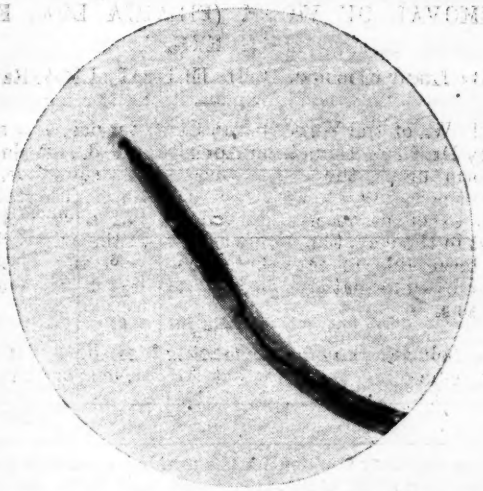

FIG. 2.—The mouth end of the worm (× 10).

The present, therefore, makes his fifth experience of the kind. All the others were, however, extracted from his lids. This was not because the worms did not pass under the conjunctiva, but for other reasons. Thus, he had several times travelled long distances to consult a doctor, only to find the worm had gone deep again when he arrived. On other occasions medical men, who were willing to remove the visitor from skin areas, declined to interfere with it on the eyeball. He has had a variety of experiences, owing to the fact that some of his surgeons were ignorant of the habits of this parasite. Thus, one seized the worm in a pair of forceps and cut down on it, but released his grip of the animal before he had captured it with a fresh pair of forceps, and to his chagrin saw it disappear from his sight. Another tried to cut down on it without first fixing the worm, and was naturally disappointed with the result of his operation.

The patient's observations on earache, caused by the *Filaria loa*, are the more interesting, because this would appear to be the first time that any account of the kind has been placed on record. The earache, from which he has suffered on several occasions, consists of an intense neuralgia behind, below, and in front of the ear, and is accompanied by great hyperaesthesia of the skin in these neighbourhoods. These attacks are so definite that he is able to diagnose their cause without hesitation. On the present occasion, the trouble began with earache on the night of April 1st, which led him to remark to his wife, "I am sure this is another of those beastly worms." A few hours later the pain passed away with a suddenness which he has learnt to regard as characteristic of such attacks, and he then felt the worm moving about in the neighbourhood of the orbit of the same side (the right).

The visits of the worms to the surface occur with great irregularity. Sometimes he feels nothing of them for months at a time; then he may have trouble for varying periods of from one to ten days or more. He is quite unable to say what brings on the attacks, though he thinks that some of the worst have been at the commencement of the hot weather. Questioned as to the influence of the heat of fires in drawing the worms to the surface, he had no evidence to give, but added that possibly this was because he "had seen so little of fires for many years." The rate at which the worms travel is considerable; in the loose tissue round the orbit, he has felt them pass from one side to the other in the course of a few minutes; there is always, however, the possibility that more than one worm may be present, though he does not admit this as an element of confusion, stating he can "feel the brutes travelling." He has noticed on at least two occasions before the present, that the removal of one worm from the eye has been followed by the appearance of a second

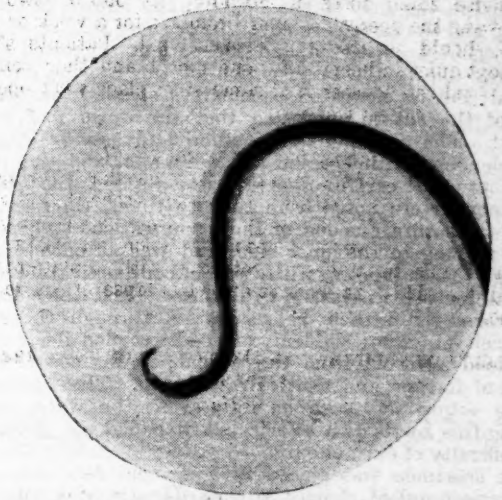

FIG. 3.—The tail end, showing the opening of the ano-genital orifice (× 10).

parasite on the following day, and he suggested that probably they were a pair. On this occasion one worm was removed on April 2nd, and he was feeling a second round the opposite eye all the following morning. On several occasions previously he has felt two worms at one time, one round each eye.

Two explanations of this phenomenon suggest themselves: (1) That the conditions, atmospheric or otherwise, which attract one worm to the surface, might equally readily attract two or more, and (2) the idea, suggested by the patient, that the second worm is a male with nuptial designs following the first, a female, in the course of her peregrinations. The explanations are on all-fours with those which cover the well-known Indian experience, that if one kills one snake near one's house, one must be on the look-out for its fellow shortly afterwards.

An interesting feature and one very difficult to explain is that the worm which was removed in 1911, that is, within two years of the first possibility of infection, was 60 mm. in length, whilst this one, removed seven years later still, was 36.5 mm. long, and the others, removed in 1914 and in 1917, have all been shorter than either of these. From the commonly accepted views, one would rather have expected to find an increase in the size of the worms extracted as years passed by.

The patient was sent home from West Africa for a low form of fever, with evening temperatures of from 99° F. to 100° F., which, it has hesitatingly been suggested, might be due to filariasis.

Operation.

The patient was sent on April 2nd, 1918, by Dr. Daniels, who had seen the worm in the eye, and advised immediate extraction. On examination, the conjunctiva was congested, but no worm could be seen. The patient stated that it had just left the eye, but that he believed it might come back. He felt it moving about, and seemed to have no difficulty in localizing it. At one time he said it was in the outer part of the upper lid near the skin; shortly afterwards it was close to the conjunctiva above the inner canthus; then it had passed over again to the outer side of the eye, but this time just below the lower fornix. After waiting some time, there seemed little hope of it appearing, and so, acting on the knowledge that these worms tend to come to the surface under the influence of heat (as has been shown by their causing eye trouble when the patients sit before a warm fire), hot fomentations were applied. Very shortly afterwards the worm could be seen wriggling freely in long sinuous loops beneath the conjunctiva, below and close to the cornea. Cocaine was instilled, the patient was told to look up, and the lower lid was pulled down. The interference alarmed the worm, which quickly endeavoured to escape, its movements being extraordinarily rapid, but just as it was disappearing under the dense tissue of the lower fornix a dive was made for it with a pair of conjunctival forceps. It was difficult to say whether it had been caught or not, but a curved needle armed with a silk suture was passed through the fold of conjunctiva included in the grip of the forceps; the suture was tied tightly and the forceps removed. For some time no movement could be observed, and the patient suggested that this was due to the toxic action of the cocaine on the animal; but an elongated oedematous swelling on either side of the suture suggested that the worm had been caught. The conjunctiva was thoroughly anaesthetized, and blanched with cocaine and adrenalin, and the part was kept under careful observation by a nurse. Suspicious movements were noted from time to time. On manipulating the suture, one end of the worm was suddenly seen, freely moving to the inner side, and was at once seized through the conjunctiva with a pair of conjunctival forceps. A small incision was made with scissors, and the coils of the worm could then be recognized through the subconjunctival tissue; suddenly one end wriggled itself free, and stood right out from the wound; it was seized with a pair of forceps, and gently drawn upon. The tightness of the suture was such as to prevent the worm from getting free by its own efforts, but it added very little to the difficulty of extraction.

The specimen was placed in 5 per cent. formalin, and was photographed shortly afterwards. On removing it, what looked like another small worm was found lying imbedded in mucus in the lower cul de sac of the conjunctiva. This presented a curled-up end, and distinctly was either part of a small worm or was the macerated end of a larger one. This small mass was unfortunately lost, owing to an accident. The larger worm was a well-grown female *Filaria loa*, showing some embryos in its uterus. When fresh it measured 36.5 mm. It is shown in Fig. 1, double the actual size. Figs. 2 and 3 show the head and tail ends of the worm respectively, under a magnification of 10 diameters.

Unfortunately no examination of the blood was made.

A VACCINE for the treatment of dysentery, prepared in Hamburg, and called "Ruhrheilstoff-Boehncke," has been recommended in a Government order of December 15th, 1917. It is said to differ from an earlier preparation with the same name in containing no free dysentery toxin. The therapeutic results are said to be good.

THE PROGNOSIS IN WAR NEPHRITIS.

AN ANALYSIS OF 171 CASES.

BY

RODOLPH G. ABERCROMBIE, M.D.,

TEMPORARY CAPTAIN R.A.M.C.

WITH the aid of the Medical Research Committee the subsequent history has been investigated in an unselected series of 171 cases of war nephritis.

During their initial stage the cases had been under my care in a base hospital in France, to which they were admitted between April, 1915, and February, 1916, inclusive. Their after-histories have been traced until November, 1917—that is, for periods varying from twenty-one to thirty-two months. The symptomatology of the cases has been previously fully detailed.[1] Their initial stage was an acute illness, exhibiting albuminuria with oedema.

Mortality.

Six deaths occurred: one in France, three in English hospitals, and two after discharge from hospital in England.

Results of First Period of Home Treatment.

From France the cases were evacuated to English hospitals, from which they were discharged direct, or transferred to convalescent hospitals or command dépôts. Taken together, this comprised the first period of home treatment; the results of it were as follows:

32 men were invalided as permanently unfit on account of nephritis (23 being invalided from hospital, 3 from convalescent hospital, 4 from command dépôt, 2 from Canadian Casualty Assembly Centre).
131 were discharged to some form of duty.
1 was discharged from command dépôt for rheumatism.
1 was discharged on termination of engagement.
3 died in hospital.
1 died after having been discharged to light duty.
1 died after having been invalided.

The last two cases have been included only amongst the deaths. In the case of seven men who had been discharged from hospital to duty, the subsequent history could not be traced for various reasons; these seven men have therefore been altogether excluded from the series.

Subsequent History.

Of the 131 cases discharged to duty, 22 subsequently either relapsed or showed chronic renal symptoms, and were ultimately invalided for nephritis; the remaining 109 showed no further history of the disease.

Table giving Percentages of Results in the whole Series.

	No. of Cases.	Percentage of whole Series.
Died	6	3.5
Invalided for nephritis during first period of home treatment	32	18.7
Returned to duty, but subsequently invalided for nephritis	22	12.8
Showing no further history of nephritis ...	109	63.7
Variously accounted for...	2	1.3
	171	100.0

Adding together the deaths, the number invalided during the first period of home treatment, and those invalided after return to duty, the total loss was 60 men, or 35 per cent. of the whole number.

The average stay in hospital and convalescent hospital (excluding command dépôts) during the first period of home treatment was for all cases 89 days; for the cases invalided during the first period of home treatment, 130 days; for those invalided after return to duty, 107 days; for those returned to duty and showing no further nephritic history, 72 days.

With regard to the 22 cases returned to duty but subsequently invalided, the average interval between discharge from hospital and final invaliding was six months. Of these cases 12 were readmitted to hospital; 10 were invalided by medical boards without readmission to hospital; the final breakdown must therefore frequently have been due to gradually developed renal symptoms rather than to definite relapse. Since cases are also invalided from command dépôts without readmission to hospital, it is evident that the study of hospital readmissions affords

only imperfect evidence of the invalidism following nephritis.

With regard to the 109 men who showed no further nephritic history, their military efficiency cannot be exactly stated. Approximately, 79 became first-line troops, 30 being relegated to garrison duty or some form of home service. These 109 men are not, of course, all still in the service; 8 have been killed, others wounded, gassed, made prisoners, and 3 invalided for diseases other than nephritis.

The number of cases known to have proceeded again overseas on military service is 71; of these, three relapsed in France, one man having three distinct attacks. None of these three men had had nephritis before the war; all were ultimately invalided.

The different hospitals varied greatly in their handling of the patients: some cases were kept in hospital for long periods; others were discharged to duty after a few days, frequently relapsing; others were invalided after two or three months in hospital, not having had time to recover. One case invalided as permanently unfit showed no evidence of disease on medical examination about a year later.

Influence of Age on Prognosis.

The cases have been arranged in five groups, according to age; the numbers and percentage of the loss from death and invaliding due to nephritis are given in each group.

Age Groups.

	Under 26.	26–30.	31–35.	36–40.	Over 40.
Number of cases... ...	46	45	42	21	15
Loss due to nephritis ...	18	12	14	6	10
Percentage of loss ...	39	26	33	28	66

The cases over 40 thus did badly; and the youngest group also showed higher invalidism than the remainder. The fatal cases were aged 54, 39, 38, 32, 29, 20.

Influence of Previous Attacks.

Of the cases, 32 gave a history of previous renal disease; of these, 2 died, 10 were invalided during the first period of home treatment, and 4 were invalided after returning to duty, making a total loss of 16, or 50 per cent. In one of the invalided cases the previous attack had been in France during the war.

In 134 cases no previous renal history was obtainable; of these, 4 died, 22 were invalided during the first period of home treatment, and 18 were invalided after returning to duty—a total loss of 44, or 32 per cent. In 3 cases, all of whom recovered, information as to previous attacks was not recorded.

Prognostic Indications during Initial Stage.

Prolongation of the initial stage is unfavourable. The cases were not evacuated from France until free from oedema and uraemic symptoms, and until the urinary flow was re-established; the average period from the onset (as given by the patient's history) to the date of evacuation was twenty-four days. Of 68 cases in which this period was above twenty-four days, 50 per cent. died or were invalided; whereas of 97 cases in which this period was twenty-four days or under, only 27 per cent. died or were invalided.

Cases showing severe uraemic symptoms during the initial phase are slightly more unfavourable with regard to remote prognosis than the ordinary type of case. Five of the cases had convulsions in France; of these, two were ultimately invalided, and three returned to duty, two of them proceeding again overseas. Eight cases showed other severe uraemic symptoms (deep torpor, twitching, amaurosis); of these, four were ultimately invalided, and four returned to duty. Convulsions were thus less unfavourable than other severe uraemic manifestations; this accords with the observation[1] that after convulsions a severe case often begins to improve rapidly.

Definite ascites is unfavourable; of fourteen cases, eight were invalided. The abdominal tumidity sometimes mistaken for ascites has no prognostic importance.

No special symptoms marked the initial stage of the fatal cases.

Pathological Sequelae.

Cardio-vascular changes were noted in the hospital records or invaliding documents of fourteen cases, in which such changes had not been observed during the initial phase.

Tuberculosis appears to have a definite consecutive association; in one fatal case, dying seven weeks from the onset, early active tuberculosis of the lungs was found in addition to nephritic lesions; in a second case, invalided for nephritic symptoms one year after the onset, tubercle bacilli were present in the sputum at the time of invaliding; a third patient, who during the initial stage had shown typical renal dropsy, was invalided for tuberculosis of the kidney and epididymis nine months after returning to duty; and a fourth case was invalided for pulmonary tubercle about a year from the onset of nephritic symptoms.

Persistent albuminuria was the most frequent cause of invaliding.

Prognosis in "Lower Tract" Nephritis.

This name has been suggested[1] for a condition, not uncommon in France, of febrile haemorrhagic pyelitis, sometimes associated with cystitis, tending to relapse, showing neither oedema, uraemic symptoms, nor raised blood pressure, but with urine containing granular casts. Six such cases (not included in the series) have been traced. Five returned to and remained at duty; one, aged 38, was invalided for headache and accentuation of the cardiac sounds; a few months later the albuminuria had completely disappeared.

Such cases are therefore more favourable than the true nephritis cases. In none of them was there mention of the occurrence of oedema.

Remarks.

During the early stage of the war it was necessary to evacuate the cases from France as soon as possible. With greater hospital accommodation, it may now be possible to keep them longer in France, with advantage, for early transport unquestionably sometimes provokes relapse. This, together with more experience in English hospitals, should lead to improved results.

The records permit conclusions other than those expressed statistically. Cases arriving in England ought not to be discharged from hospital until they have been tested by full diet and ward work, with subsequent examination of the urine; they should not be sent to duty till the albuminuria is absent or minimal. Men should not be invalided as permanently unfit until a reasonable time (say, five months) has been allowed for recovery; two attacks during the war should justify invaliding.

Although against instructions, cases with abundant albuminuria are constantly sent to command dépôts, which are ill adapted for such cases. Better results might perhaps be obtained by collecting the cases in special convalescent camps, where their final convalescence and early hardening could be under experienced observation.

SUMMARY.

Approximately 3 per cent. of the cases died, 18 per cent. were invalided during the first period of home treatment, 12 per cent. were invalided after return to duty, 63 per cent. showed no further nephritic history. Men over 40 years old did badly; 71 cases proceeded again overseas.

My acknowledgements are due to Dr. Matthew Young, of the Medical Research Committee, for his help in the collection and collation of the records.

REFERENCE.

[1] Abercrombie: Observations on the Acute Phase of 500 Cases of War Nephritis, *Journal of Royal Army Medical Corps*, August, 1916.

INVALID RATIONS.

BY

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MEDICAL men have been placed in much difficulty of late in the matter of giving certificates to invalids for special rations, and the issue of definite instructions by the Ministry of Food (Regulation M.G.R.M. 27) will be welcomed by them as well as by Food Control Committees.

Diabetes and Tuberculosis.

The regulations allow a greatly increased ration to two large classes—namely, sufferers from diabetes and tuberculosis.

The term "diabetes" may be taken in this connexion to include all subjects of persistent glycosuria who are in need of special diet. They are allowed a maximum of 2½ lb. of butcher's meat, 1 lb. of bacon, and 1½ lb. of butter or margarine weekly. These quantities are intended for a large number of cases of mild diabetes or glycosuria who are able to keep well and active by simple restriction of, or abstinence from, carbohydrate food, and who require to make up their intake of energy entirely, or almost entirely, from protein and fat. The ration is not, of course, suitable for patients suffering from acute diabetes with acidosis. For them such quantities would be excessive and harmful. Indeed, the ration alone, without any other foods, gives about 1,500 calories a day, whereas the diabetic who has been made sugar-free and is gradually recovering his tolerance to carbohydrate, fat, and protein often does not take much more than 1,500 calories of total food for a considerable period.

In tuberculosis a maximum of 2½ lb. of meat, 1 lb. of bacon, and 1 lb. of butter is allowed weekly, giving roughly 1,300 calories a day from these foods. It is common knowledge that a good allowance of protein and fat is of great value in helping the tuberculous subject to keep thoroughly well nourished, and that by thus maintaining nutrition and avoiding overfatigue, the infective process may be prevented indefinitely from advancing or from recurring, as the case may be.

The medical grounds, therefore, for making special regulations for the subjects of diabetes and tuberculosis are obvious, and there can be no doubt that the people of this country will desire that they, like other sick folk, shall receive the diets suited to their complaints. On administrative grounds it is convenient to separate them because they are so many. On national grounds also their special treatment is justified, because there are great numbers of glycosurics and of those who are or have been tuberculous, who are doing a good day's work, and not a few who are carrying out duties of more than usual value to their fellow men. The disablement of such a large body of home workers from a lack of the special food they need would be an unnecessary loss to the country at this time.

Lactation and Pregnancy.

The nursing mother is allowed an extra quantity of meat and fat indirectly, as, soon after the baby is registered, she is able to draw for it a child's ration, which she should consume herself. She is also entitled to a preferential allotment of a pint and a half of milk daily until the child is 18 months old. These allowances will cover the 500 to 1,000 calories which the infant may receive from the breast. Indeed, in most cases there will be a good margin in the mother's favour.

During pregnancy such large additions of food are not required, as though both the growth of the infant and the laying up by the mother of a store of fat for lactation have to be provided for, yet the daily addition of tissue is but small. A pint of milk extra a day in the last three months is allowed in addition to the ordinary diet.

Other Invalids.

If extra food is required by any other classes of invalid except those who are the subjects of diabetes, tuberculosis, and one or two rare complaints mentioned below, it should be supplied in the form of milk, for which a priority ticket may be issued by Food Control Committees on a medical certificate; or in the form of non-rationed foods. Most of the articles of food, besides milk, which are important in cooking for the sick, such as eggs, fish, arrowroot, rice, and flour, are not rationed.

Acute Illnesses.

A broad survey of those invalids whose diet requires special regulation shows that the greater number are suffering from temporary acute or subacute illnesses, including febrile affections of all kinds. Of these a large proportion take less food than ordinary folk and many cannot take solids at all. For all who need it extra milk may be obtained.

Beef-tea.

The beef-tea which in years gone by was used in large quantity for the sick cannot now be made, and medical men should be especially careful not to order it. Our profession has long been explaining to the public that beef-tea does not possess the food value with which it has been credited for generations. At the present time it is especially wasteful, as it uses up good meat, the food value of which can be utilized fully when it is cooked and eaten by others. The real use of beef-tea is not to feed the sick, but to comfort, satisfy, and stimulate them. Its place may be taken by a mixture of meat extracts with boiling water, or with barley or rice water, to which food value may be added in the form of dried milk.

Neurasthenia.

Neurasthenia, in its many forms, is commonly treated by a liberal diet, containing a large proportion of protein and fat. But it would have been impracticable to allow extra rations for that complaint, as there is no possible limit to the number of claims that might have been made. For the severer cases, which are comparatively uncommon, a sufficiently nourishing diet can be obtained from non-rationed foods, particularly fish and eggs.

Malnutrition.

There appears to be greater hardship in withholding extra rations from cases of severe malnutrition following acute or chronic illness. Some of these patients would undoubtedly make good use of a larger allowance of meat and fat. It would, however, be difficult to draw up a definition which would include them and them only, and there is no reason why, with the help of fish, eggs, and an extra allowance of milk, they should not receive all the food they need. The cereal foods, which are not rationed at present, are plentiful, and will remain the most important source of energy in their diet. It must be remembered also that probably the greater number of such cases will be found in hospitals. In the military hospitals more meat is available. In civilian hospitals the fixed ration of meat and fat is drawn for each patient, but, as those who are acutely ill do not need so much, more is available for the convalescent.

Indigestion.

The numerous sufferers from indigestion do not, as a rule, require extra food, rather the reverse. There is, however, one form of indigestion—the hyperacid form—which is benefited by a diet containing a higher proportion than usual of protein and fat. A free use must be made in such cases of eggs and fish, whilst those who are able to take olive oil, in a dose of an ounce before a meal three times a day, will receive benefit and incidentally a food value of nearly 800 calories. Milk is often badly borne by such patients. These remarks refer only to hyperacidity as ascertained by analysis of the gastric juice. The diagnosis made from symptoms alone is often mistaken.

Chronic Diseases.

There is a large class of chronic diseases, such as gout, colitis, and diseases of the heart, liver, and kidneys, which require adjustment of the diet, but not as a rule any increase of meat and fat. In rickets plentiful fat is beneficial, and has even been thought to be specific; it can be supplied in good milk, or as olive oil, cod-liver oil, or any medicinal preparation of fat that can be obtained. In scurvy, as in other cases of deficiency of vitamines, it is a suitable variety of diet that is needed, and not necessarily any increase of quantity.

Rare Diseases.

Special rations will be allowed for certain diseases, such as coeliac disease, pancreatic insufficiency and sprue. All these are of such rarity that there are many medical men who have never seen a case.

Coeliac disease is a disorder of childhood, arising usually at the age of 2 to 3 years. The symptoms are chronic diarrhoea with large pale motions, weakness and sometimes tetany. There may be deficient absorption of fat. It is treated by giving a diet of ½ lb. to 1 lb. of raw minced meat daily.

The term "pancreatic insufficiency" is used in two senses. It is sometimes applied to cases showing no gross disturbance of the absorption of food in which mild pancreatitis or early diabetes is diagnosed from the occurrence of sugar in the urine or from more complex examinations of the urine and faeces. Such as these, unless they come into the diabetic class, do not require extra rations.

Genuine pancreatic insufficiency comprises cases in which, owing to inflammation or disease of the pancreas or obstruction of its duct, the pancreatic juice is in good part or entirely absent from the intestine. In such cases the digestion of fat is greatly interfered with, as is that of protein, and in some the assimilation of carbohydrate is also impaired. Much of the food is then wasted and extra food has to be given, especially meat, if nutrition is to be maintained.

Sprue is somewhat commoner than either of the above but it is not every case of sprue which needs a special allowance. There are, however, cases which improve wonderfully on a diet of meat alone, and are able to take large quantities, more than 2 lb. a day, with relish.

In such cases as these, and doubtless in others in which sound reason can be given, the ration may be varied on detailed application being made to the Food Control Committee, who will communicate with the Medical Section of the Ministry of Food.

Sugar: White Flour.

Extra sugar will only be allowed in severe cases, such as are fed by tube. Applications for white flour should be reduced to the minimum, since it has been shown that war bread, when properly baked and chewed, is as digestible as white bread, though it may not be so palatable.

Restricted Tastes.

The doctor's chief difficulty is not with the sick. It is with those, not obviously ill, who assume that the food to which they are accustomed is the food that is necessary for their health, and appeal to him to support this view by a certificate. Many people have grown up in the belief that their digestion is peculiar. Occasionally that is true, but nearly always it is not. Every one of experience will agree that genuine idiosyncrasies are among the rarities of medicine. The thoughtless indulgence of parents is sometimes to blame for restricted tastes; but whatever the cause may be all doctors know what a handicap to the individual such special dislikes are in illness; and at the present time they prove most inconvenient to their owners. No one would pretend that the foods now available are what we would prefer either in health or sickness, and those who feel the change most will have general sympathy; nevertheless, it is the duty of the medical man to explain to such applicants that their condition is not one for the treatment of which it is justifiable to ask for a larger share of the national store.

Conclusion.

For those who are really ill it will often be necessary to draw up a diet scheme in some respects different from that which would have been drawn up in former days. But, with the allowances made by the Food Controller, it is possible to secure that invalids of all classes shall receive suitable food, and enough of it for their needs.

A CASE OF PROMPT RECOVERY AFTER NERVE SUTURE.

BY

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My reason for recording this case is that I do not know and have not read of so early a recovery of practically all functions in a severed nerve after operation. When a nerve is bound up in scar tissue, or has simply been bruised, operation to rectify this condition is usually at once successful, but not if the nerve is severed, except after a long period.

Sergt.-Major ——, a German, aged 26, wounded left elbow, in France, June 22nd, 1917; the internal condyle of the humerus and part of the olecranon process of the ulnar were smashed. On August 3rd operation for septic condition of the wound was performed, and some sequestra removed; *x*-ray examination showed fracture of the internal condyle and olecranon process, and three foreign bodies in the forearm. On November 23rd I removed one foreign body from the front of the elbow-joint. The wound gradually healed, leaving a triradiate scar on the inner side of the joint.

Sensation was lost over the cutaneous distribution of the ulnar nerve in the hand, both front and back. He could not flex his little finger, and only very slightly the ring finger. He had a trophic sore over the dorsum of the little finger. There was no doubt that the ulnar nerve distribution was almost completely paralysed.

Operation.

On January 24th, 1918, an incision was made over the inner side of the elbow-joint. The ulnar nerve, exposed above and below the joint, was found to be severed in the region of the internal condyle of the humerus. The proximal and distal portions were dissected, found slightly bulbous, with some intervening scar tissue between the two ends. The upper and lower segments of the main trunk were electrically stimulated. Some slight response was seen on stimulating the lower segment, and a very feeble response on stimulating the upper segment. The severed ends were cut off transversely as level as possible, and brought together with fine catgut sutures, and the junction surrounded with Cargile membrane. Exact apposition of the cut ends was aimed at.

After-History.

January 27th, 1918. The patient could feel very slightly on the fourth and fifth fingers.

January 30th. The wound had healed by first intention. Sensation had increased over the whole of the ulnar distribution. To my intense surprise the patient on being asked to flex his little finger and his fourth finger did so quite well.

February 27th. Sensation had completely returned over the whole area formerly insensitive. His grip grew stronger every day. He could hold a book or a weight quite well, and even use a hammer. The only defect present four weeks after operation was a feebleness in the action of the third and fourth dorsal interossei muscles. All this, notwithstanding the fact that his wound was formerly septic, and though now perfectly healed, he still has two small foreign bodies in his forearm.

We are told that, according to the theory of Wallerian degeneration, a nerve severed completely degenerates in its whole distal portion. Again, there is ample evidence that regeneration does occur when the cut ends are joined by fibres growing down from the proximal end. In this case there was no doubt whatever that section of the nerve had taken place at the time of injury by the bullet, yet the fact that there was some response in the distal portion when electrically stimulated may be accounted for, because probably some nerve fibres were present in the 1½ in. of scar tissue between the two separated ends of the nerve. Most recent writers on nerve injuries—for example, Sir Purves Stewart and Mr. Evans—say that regeneration seldom takes place in less than three months, and that it is often eighteen or twenty-four months; that sensation returns first and motor function some time after, the earliest known recovery of sensation alone being ten days. Moreover, after considerable septic infection results are longer delayed.

Professor Waller, to whom I wrote, has kindly sent me a few lines on the case. He says that "in those few cases of prompt recovery which have been recorded no satisfactory explanation has been offered. I am inclined to think that prompt recovery may be due to the stirring up by the operation itself of recurrent sensory fibres belonging to other nerves that may form part of the peripheral distribution, and may have had their action in abeyance during complete paralysis before operation. Increased knowledge in the present day of the extensive halo of functional disturbance aroused by an organic focus of real injury would lead me to be on the watch for the possibility of prompt reappearance of sensation, by the cerebral suggestion as well as by the peripheral excitation afforded by the operation itself. I am at the present moment engaged in measuring the 'emotivity' of shock and other cases, and it would be useful to know if your patient was of high or low emotivity."

As far as one can judge clinically this patient is of low emotivity.

I am indebted to Dr. Charles Corben for assisting at the operation, and to Lieut.-Colonel Guthrie, R.A.M.C., for permission to publish the case.

THE Carnegie United Kingdom Trust has published a most elaborate report on public baths and wash-houses, prepared for the trustees by Miss Agnes Campbell, B.A. The report sets out with lavish detail the present provision of baths and wash-houses throughout the United Kingdom, the use made of the facilities provided, the finance of such undertakings, and a discussion of the factors which bear upon the subject generally. Without wishing to minimize the value of such an exhaustive investigation, the question occurs to us whether, in the present situation, with an extreme scarcity of paper, the publication of a monograph weighing 2¾ lb. is expedient.

A SPECIAL CRUTCH FOR MEN WHO HAVE LOST BOTH AN ARM AND A LEG.

BY

R. LANE JOYNT, Lieut.-Colonel R.A.M.C.,

DUBLIN.

The accompanying illustrations show a crutch designed by me for a man who has suffered a double amputation (Figs. 1 and 2). He has lost the left leg below the knee, and the left arm at the surgical neck of the humerus, so that there is no axilla capable of bearing weight on that side. The appliance enables a man so disabled to move about either while he is waiting to have an artificial leg fitted or when he is tired of using the new leg.

Fig. 1.—Crutch for loss of left leg and left arm; the patient standing beside it.

Fig. 2.—The patient using the crutch.

The appliance consists of two crutches of the bifurcated type mortiched into one axillary piece in the form of the letter A. The crutch, on the side on which the leg is lost, slopes more than that on the sound side and its timbers are mortiched inside the latter (Fig. 3). Cross-bars of wood complete the horizontal part of the letter A, but project to the outer side of the more sloping crutch to form, with a curved aluminium plate, a shelf on which the man places his flexed leg stump. The two crutches are braced together above, and a steel wire truss takes up the side strain on the more sloping crutch. A handle is fitted in the usual place on the sound side. The legs of the crutch are two feet apart at their base.

In use the man places his stump on the shelf and swings his sound leg between the crutch legs. No weight need be borne on the axilla of the sound side.

The total height of the appliance should be at least two inches less than that of ordinary crutches intended for a man of the same height. This is necessary to enable the man, by fully straightening his sound leg, to lift the crutch forward clear of the ground. A man with only one hand can stand on the appliance and remove his hand from the handle to open a door, or use his hand for other purposes. If the patient has lost an arm on the opposite side to the leg, the handle is placed outside the stump shelf, the axillary piece of the crutch being on the armless side, not necessarily carrying any weight.

Both types are being used in the Duke of Connaught's Hospital for Limbless Soldiers at Bray, co. Wicklow, for

Fig. 3.—Crutch for loss of left leg and either arm.

Fig. 4.—Extemporized crutch for loss of left leg and either arm.

double amputations as well as for cases of crutch paralysis.

For emergency work the appliance may be rapidly constructed, as shown in Fig. 4, by lashing together two strong bifurcated crutches with the head of one crutch below the other; a few pieces of timber lashed crosswise serve to brace them firmly and by their projecting ends to form the shelf. Vertical pieces of timber lashed from the shelf to the foot of the more sloping crutch relieve the side strain.

It is made by Messrs. Smith and Sheppard, of St. Stephen's Green, Dublin, in its various forms, and the following measurements should be given: Height from sound axilla to ground, height from sound axilla to middle of sound hand, height from perineum to ground, and state which arm and leg are lost.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TOXIC JAUNDICE: ATROPHY OF LIVER: REGENERATION AND RECOVERY.

The observations of Dr. Crawford (p. 450) on the recuperation of the liver tissue after an attack of toxic jaundice caused by the action of T.N.T., agree closely with those which I have been able to gather at another big filling factory.

Of the number of cases reported since notification came into force we have 33 still remaining at work with us. Ten of these were notified erroneously and there is doubt as to the nature of a further three; but the remaining twenty were apparently cases of true toxic jaundice. I have made a full examination of all these within the last six weeks. I am not able to say in every case to what extent the area of liver dullness was diminished during the attack, as in the early days of the factory the patients were allowed to go to their own homes about the country for treatment; but when I made this examination, from six to eighteen months after their return to work, the fact was marked that they did not show diminution in the area of liver dullness nor interference with nutrition or the digestive functions.

The most noticeable thing about some of the cases is that though the liver seems to have recovered they show signs of deterioration of heart muscle, with inability to undergo sustained exertion, and general signs of heart distress—in fact, they present the same picture as those workers who have suffered from severe toxaemia without jaundice, and my experience here is that those workers who recover from toxic jaundice do not afterwards suffer from damage to the liver function so much as they do from degeneration of heart muscle. I feel that the toxaemia is the general affection, and that jaundice is an accidental symptom in certain cases, determined by some at present unknown cause in certain of the victims of toxaemia. One very general feature is the complaint for the first few months after convalescence of pain in the right side, either over the liver area—front or back—or in the abdomen just to the right of the umbilicus.

I note with interest Dr. Crawford's statement that in her cases the motions were not completely bile-free; this, to my mind, should be a common sign in toxic jaundice, owing to the fact that some of the liver tissue is operative, and that the bile ducts are not occluded. My experiences also coincide with Dr. Crawford's statement that cyanosis is not a necessary antecedent to toxic jaundice, many cases showing no signs of it when the first tinge of yellow showed in the sclerotics.

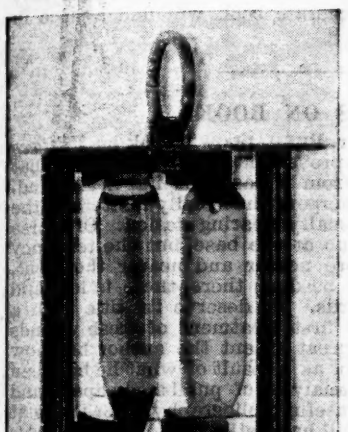
Chilwell, Notts. W. Bower, M.A., M.B., B.C.

A WAX THERMOMETER PRIMARILY DESIGNED FOR USE IN HOT-AIR STERILIZING CHAMBERS.

THE thermometer here shown is intended to be introduced with each batch of clothing. It consists of a metal frame provided with two sets of spring clips, into which fit two glass bulbs—large vaccine ampoules do admirably—the one containing wax melting at the minimum temperature adopted for sterilization, the other wax melting at a temperature beyond which it would be dangerous to expose clothing. In each bulb are a few small black glass beads.

The bulbs are placed in position beads uppermost, and after use, when the wax has rehardened, are slipped out and put back again with the beads at the top end.

Since at the required temperature the wax in the bulb takes ten minutes to melt, the deposition of the beads at the bottom of the bulb indicates, for instance, in the case of the minimum bulb, that this temperature has been reached and maintained for, at any rate, this length of time.



From a photograph of the thermometer.

In order to ascertain what reliance might be placed upon the sterilizing effect on lice and their eggs of a temperature of 60° C. maintained for ten minutes, experiments were very kindly carried out by Mr. A. Bacot, of the Lister Institute, both upon lice and their eggs exposed in this manner in a hot-air sterilizing chamber in France, and subsequently dispatched to London for the determination of their viability, and upon lice and eggs similarly exposed by Mr. Bacot himself. In each instance the experiment proved that an exposure at 60° C. for ten minutes is lethal to lice and their eggs.

With this knowledge, therefore, a wax melting at not less than 60° C. may be adopted for the minimum bulb, and a wax melting at a temperature not higher than 75° C. or 80° C. for the maximum bulb.

This thermometer is, in essence, an adaptation of Bacot's idea of placing dishes containing wax in hot-air sterilizing chambers, and I take this opportunity of expressing my best thanks for the keen interest he has taken in this appliance during the testing of its practicability.

I wish also to express my thanks to the O.C. —— Army Wireless Company, R.E., in whose workshop the original model was made; to Captain W. H. Smith, R.F.C., for the excellent photograph; and to Captain Jacobs, R.A.M.C., for opportunities for testing the appliance in the hot-air sterilizing chambers he has designed.

Note.—Care must be taken to ascertain by actual trial in the bulbs if the wax supplied by the makers complies with the indicated melting point. If necessary, suitable adjustments should be made by mixing waxes of different melting points.

E. EMRYS-ROBERTS, M.D.,
Captain R.A.M.C.

FRACTURE OF INTERNAL CONDYLE OF HUMERUS BY MUSCULAR ACTION.

PTE. R., aged 29, jumped from the ss. ——, while she was sinking, on to the deck of a rescuing ship. To break his fall he caught a tightly stretched rope with his left hand, and as he gripped it, felt a sudden pain in his "crazy bone." He did not fall, but landed on his feet with his arms above him holding on to the rope, and is quite certain that nothing hit his elbow. The radiograph showed a separation of the internal condyle, undoubtedly due to muscular action of the flexors of the wrist. At the present time, three months after the fracture, the separated condyle is displaced downwards, firmly adherent to the humerus, and the joint movements are perfect. All the man complains of is a continuous dragging pain at the site of the fracture. The reattached condyle is very tender to touch, evidently due to injury or implication in callus of the ulnar nerve, although there is no anaesthesia below the elbow.

GERALD LAWRENCE,
Captain R.A.M.C.

Reviews.

AMERICAN ADDRESSES.

IN the autumn of 1917 Sir BERKELEY MOYNIHAN gave some addresses to American audiences, and he now publishes them under the not very perspicuous title of *American Addresses*.[1] The dedication is to G. W. Crile, and the preface indicates that they are intended for the use of American colleagues entering upon war conditions from which we have learnt, and unlearnt, many things. That three-fourths of the book is a summary, eclectic certainly, of professional war literature, the author candidly acknowledges when he says on the first page, "I have gathered a posie of other men's flowers." The paper called "The Causes of the War" might, indeed, well have been elaborated, for even if he cull others' blooms, Sir Berkeley is skilled in arranging the bouquet; he carries one in fancy to the native soil of the flowers. There is no question here of diplomacy or armaments or murders. It is the elemental question of Auramazda or Ahriman, freedom or tyranny, voluntary dedication or authoritative subjection.

"That one man," said Glanvill (*The Vanity of Dogmatizing*), "should be able to bind the thoughts of another, and determine them to their particular objects; will be reckoned in the first rank of *Impossibles:* Yet by the power of advanc'd *Imagination* it may very probably be effected." Sir Berkeley is all for imagination; says of it that "it is the scaffold upon which one stands to build the structure of truth," and thinks it is just because the Prussian state has found another means of binding men's thoughts and determining them to its sinister purposes, that we are at war. The German has deliberately perfected a system of education to mould the mind, from the cradle to the grave, into the conviction that expediency backed by power is "right." To none will the moral appeal more forcibly than to American citizens; where a fundamental ideal is at stake, compromise is out of the question; it must be a fight to a finish. American surgeons and, we believe, the whole people of the United States are in the war to see it to that finish.

The second paper, on "Gunshot Wounds and their Treatment," describes the bewilderment amid which aseptic surgery found itself suddenly out of its depth, with the art of swimming nigh forgotten; describes the recovery of old and the development of novel strokes wherewith to ride the flood. The story is well told in a manner adapted to the author's purpose. It seems doubtful if he has made clear enough the essential difference between the use of bipp and similar agents in wounds excised within six or eight hours of receipt, when the function is to inhibit the development of organisms; and their use in wounds not only "contaminated" but already "infected": in which the bacterial strains are already established.

The third study is on the treatment of injuries of peripheral nerves, which was published in full in our columns on November 3rd, 1917. The experience of some surgeons may dispose them to disagree with the author's dictum that "nerve anastomosis is to be sharply condemned." In cases in which a large defect precludes suture, the careful insertion of peripheral and proximal ends within the sheath of a neighbouring trunk has, we understand, been productive of a result that is, to say the least of it, better than none.

Two other papers, on gunshot wounds of the knee-joint, and of the lungs and pleura, give a good general account of the principles upon which more recent methods are based.

[1] *American Addresses.* By Sir Berkeley Moynihan, C.B., M.S., F.R.C.S. Philadelphia and London: W. B. Saunders Co. 1917. (Demy 8vo, pp. 143. 7s. 6d. net.)

MARITAL PHYSIOLOGY.

In a small work entitled *Married Love*,[2] Dr. Marie Stopes has endeavoured to meet the need of healthy young people of the educated class for information as to the sexual responsibilities of marriage. Though not a medical woman, the author has special qualifications for this task: with high scientific attainments she combines literary skill, sympathetic insight, idealism, and more than common courage. As Dr. Jessie Murray points out in a short preface, this aspect of sex relationship has usually been looked on as too sacred or too dangerous for entirely frank treatment; but the modern view is that reticence has been carried so far as to defeat its purpose; everything depends on how the matter is presented. To the married and to those about to marry, provided they are normal in mind and body and not afraid of facing facts, this should prove a most helpful book. It is more than a physiological treatise on the Tree of Knowledge, written from the woman's point of view in popular language; sexual aberrations beloved of German writers and their English and American imitators are left alone. Notwithstanding the vast output of books on sex in recent times, Dr. Stopes has, we think, proved that something remained to be said on this subject if the right person could be found to say it in the right way.

As part of her main argument she sets out a view of the periodicity of sexual desire in women with a degree of precision not hitherto attempted. It is not exactly new, for the idea of periodicity was much canvassed during the discussion of the relation, if any, of menstruation to oestrus some years ago, and in general literature is the undertone of Tolstoï's terrible little book *The Kreutzer Sonata*. Dr. Stopes expresses her intention to publish in scientific form and at greater length the results of her observations. This seems desirable, as the text fails to carry the assurance that the generalization rests on more than a relatively small number of cases, confined to a particular social class. In the meanwhile we may say that the outline as presented to a lay audience tends to explain much that has puzzled students of feminine psychology, and offers a way of married happiness that may prove very helpful to many couples.

Concerning the book as a whole we feel with Professor Starling, whose letter is included in its preface, that such guidance is necessary, since "instinct in man is all insufficient to determine social behaviour, and there is need of instruction in the highest of physiological functions, that of reproduction, as there is in the lower functions of eating and drinking." We therefore commend it to medical men and women, and through them to those of the general public who in their judgement are likely to profit by its teaching.

THE HISTORY OF THE ARMY MEDICAL SERVICE.

The *Roll of the Army Medical Service*[3] makes a fine appearance, and is a worthy memorial of the ability, patience, and accuracy of the late Colonel William Johnston; it is, indeed, only what would have been expected by those who knew the man and his work. Owing to the industry and care of Colonel Johnston we now have an accurate biographical record of the Army Medical Service from the beginning of the reign of George II to the year 1898, and those of us who have experienced the difficulty of a search in the Public Record Office and the British Museum will appreciate the load taken off the shoulders of future inquirers by the publication of this book. As a work of reference this book will rank with Munk's *Roll of the Royal College of Physicians* and Crawford's *History of the Indian Medical Service*, and we could wish that someone would undertake a similar work with reference to the Naval Medical Service. No book of this kind can claim infallibility, but after applying several severe tests we have not found any considerable errors. It was fortunate that Colonel Howell could find time to edit the book, and we do not doubt his well-known expert knowledge of military medical history has contributed to its value.

The development of the Army Medical Service can only be understood by a careful study of its history, and we had hoped that the introduction would have dealt fully with that subject. But in our judgement the history given there of the development of the service is inadequate in length, and, further, is not very clearly written. Forty pages only are devoted to a consideration of this large and important subject, which is worthy of a more extended survey. This is to be regretted, for the famous Fifth Report of the Commissioners for Military Enquiry, published in 1808, contains almost all the information necessary for a complete account of the development of the Army Medical Service down to that date. No doubt space was a consideration, but we should have welcomed a longer account of this part of the subject, especially from the expert pen of Colonel Howell. The report of the Commissioners has indeed been used, but not as fully as it might have been. But however that may be, this valuable and accurate book will find a place in every reference library.

NOTES ON BOOKS.

The second edition of Dr. Penhallow's book on *Military Surgery*[4] is a great improvement on the first. That was avowedly written from a base hospital in England. Nowadays much of the surgery that really matters to the patient is done at the casualty clearing station. Of course much remains to be done at the base, but the tendency is to do more and more nearer and nearer the front, because if good surgery be done there, there is less and less to be done afterwards. To deserve its title such a book must deal with the first treatment of fresh wounds and injuries, and to a great extent the author has now done this, partly no doubt as a result of what he has seen himself, but largely by analysis of published papers, and of these he gives a very useful bibliography. For the next edition Dr. Penhallow will have still more ample records of the latest developments in primary treatment, and will be able to make room for his account of them by omitting the present case notes, which are out of place in a work of this size.

The volume *A Complete System of Nursing*,[5] by A. Millicent Ashdown, fairly deserves its name. It is founded upon a book by the late Miss Honnor Morten, but has been thoroughly revised and greatly improved. Chapters on general nursing duties and on general observation of symptoms are followed by others on special departments of medicine and surgery. The section on the preparation of the room for an operation contains a useful enumeration of the various things a nurse must do and prepare. In the various chapters instructions are given for preparing a patient for examination as well as for operation, and this is a valuable feature. There is a chapter on ophthalmic nursing, and others on gynaecological and obstetrical nursing. The book certainly seems to tell everything a nurse can learn from print. Its fault is that in some places, especially in the remarks on treatment, it attempts too much. The description of splints in such a book cannot be complete, and it is just possible that an inexperienced nurse may consider that a case treated by any other splint than those illustrated—and some of them are a little antiquated—has not been properly treated. A warning to this effect might properly have been given in the preface.

The Happy Warrior, and Other Poems,[6] by Mr. Augustus Cook, is one of the many small volumes of verse called out by the war. Its author feels keenly the many emotions called up by battle, by the contrasts of war, by the work of women in the present times of stress, and by the part played by medical science in the relief of war's havoc. His verse shows this feeling expressed with sentiment and a clear sense of form; it should give satisfaction to many who, with similar feelings, are less happily able to give them expression.

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[2] *Married Love: A New Contribution to the Solution of Sex Difficulties.* By Marie C. Stopes, D.Sc.Lond., Ph.D., Fellow of University College, London, F.L.S., Fellow of the Royal Society of Literature. London: A. C. Fifield. 1918. (Cr. 8vo, pp. 126. 5s. net.)

[3] *The Roll of the Army Medical Service.* By Colonel William Johnston, C.B., LL.D., M.D. Aberdeen: At the University Press. 1917. (Imp. 8vo, pp. 638 + 72. 15s. net.)

[4] *Military Surgery.* By Dunlap Pearce Penhallow, Amer. Med. Res. Corps. Second edition. London: H. Frowde, and Hodder and Stoughton. 1918. (Demy 8vo, pp. 555; 226 figures. 21s. net.)

[5] *A Complete System of Nursing.* By A. Millicent Ashdown. London and Toronto: J. M. Dent, Ltd.; New York: E. P. Dutton and Co. 1917. (Demy 8vo, pp. xv + 764; 252 figures. 10s. 6d. net.)

[6] *The Happy Warrior, and Other Poems.* By Augustus H. Cook, M.B.Lond. London: G. Bell and Sons, Ltd. 1917. (Fcap. 8vo, pp. 85. 2s. 6d. net.)

British Medical Journal.

SATURDAY, MAY 4TH, 1918.

BOTULISM.

THE occurrence of a certain number of cases, the circumstances and symptoms of which recall the description of a form of food poisoning described by van Ermengem in 1895 under the name "botulism," makes it convenient to give a short account of that disease. Though he gave the name *B. botulinus* to it (*botulus*, a sausage), van Ermengem first cultivated the bacillus from a pickled ham which was not decomposed in the ordinary sense. The symptoms in these cases are stated by Muir and Ritchie[1] to correspond closely with those occurring in the so-called sausage poisoning met with in Germany and other countries where sausages and ham are eaten in an imperfectly cooked condition. The cases form a well-defined group, the symptoms of which are chiefly referable to the action of a toxin on the medulla. They include more or less marked disorder of the secretions of the mouth and nose, and internal and also external ophthalmoplegia, especially dilated pupils and ptosis—the last being apparently a very striking symptom—dysphagia, sometimes complete loss of power of swallowing, and loss of voice. Constipation is the rule, and retention of urine common. In fatal cases death is due to interference with the cardiac and respiratory centres. It is stated that there is no fever and no disturbance of the intellectual faculties, but apparently drowsiness may be a marked feature. The symptoms do not come on earlier than twelve to twenty-four hours after ingestion of the infected food.

The bacillus can be cultivated on ordinary media—best, it is said, with added grape sugar—but only under strictly anaërobic conditions. Kempner has obtained it from the intestine of the pig. The bacillus produces a very potent toxin, and the symptoms in the human subject are believed to be due to the absorption of this toxin from the alimentary canal, for it is only after or immediately before death that a few bacilli may enter the tissues. It is stated that some cases have occurred after the consumption of fish and vegetables. Marinesco and other observers who have examined the nerve cells in experimental poisoning with the botulinus toxin agree as to the occurrence of marked degenerative changes, especially in the motor cells of the spinal cord and medulla. Necropsies in man have generally shown hyperaemia of most of the organs, especially of the meninges, lungs, liver, and kidneys, due to the cardiac weakness and dyspnoea occurring at the end of the disease. Microscopically the ganglion cells in the pons, medulla and corpora quadrigemina have shown chromatolytic changes, disappearance of Nissl's granules, displacement, and cloudiness of the nucleus, and finally complete destruction of the cell. In a recent lecture on the subject Dorendorf,[2] one of the medical consultants to the German army, states that while epidemics of botulism are rare, even in Germany, isolated examples or small groups of cases are not infrequent in that country. Often many of the persons who have consumed the infected food escape, owing to the fact that only certain parts of the food have been permeated by the bacillus or its toxins. In the course of three months Dorendorf saw 7 cases in a military hospital in the east of Germany; 5 were sporadic, and 2 had contracted their illness from the same source.

Diagnosis is rendered difficult by the fact that in this form of food poisoning the gastro-intestinal phenomena are of secondary importance. The first symptoms, namely, nausea and a feeling of weight or actual pain in the gastric region, may occur, according to Dorendorf, either directly or a few hours after consumption of the tainted food. In almost all cases there is vomiting, which is usually repeated. As a rule the patient complains at an early stage of giddiness, which prevents him from walking or even standing. After twenty-four hours at the earliest, more frequently after two or three days, paralysis develops and dominates the scene. In Dorendorf's cases the sixth nerve and the branch of the third nerve to the levator palpebrae were most affected, and paresis of the pharynx and oesophagus were frequent in severe cases. Palatal palsy was also common; facial and hypoglossal palsies were less frequent. Paralysis of the larynx was present in half of Dorendorf's cases, and as paralysis of the abductors occurs rapidly, regular laryngoscopic examination is indicated in order to perform tracheotomy in cases of bilateral abductor paralysis, the danger of which is increased by the presence of ulcers on the laryngeal mucosa. Paresis of the stomach and intestine is manifested by the feeling of weight after food and obstinate constipation. Even mild cases may complain of difficulty in micturition owing to involvement of the detrusor vesicae. Paralysis of the sphincter is frequent. Disturbances of taste and smell were not observed in Dorendorf's cases, but two of them complained of tinnitus. The extremities were not affected in his cases, but Burger has noted paresis of the lower limbs and loss of the knee-jerks. Paralysis of the diaphragm is not uncommon. Considerable tachycardia, indicating vagus paralysis, has frequently been noted before death. Sensory disturbances do not occur, and Dorendorf did not observe any disturbance of consciousness. Somnolence was observed only in the severest cases; it passed into coma. The temperature was not raised unless complications developed, such as deglutition or hypostatic pneumonia, parotitis, or inflammation of the upper respiratory and digestive tracts. The dryness of the upper respiratory and digestive tracts was constant, and in severe cases was the cause of ulcers in the mouth, fauces, and pharynx, epistaxis, and frequently of parotitis. It also contributed to the difficulty in swallowing invariably present. The diagnosis in Dorendorf's cases was made on clinical grounds, and in one case on the strength of the *post-mortem* findings. Attempts to cultivate the *B. botulinus* from the organs failed. It is suggested that in doubtful cases the diagnosis might be established by injection of the patient's serum into guinea-pigs, as subcutaneous injection of the watery extract of infected ham or cultures produces characteristic paralyses of the extremities, intestine, and bladder in these animals. Dorendorf puts the mortality as high as 60 per cent., death being due to paralysis of the respiratory centres, cardiac paralysis, or pneumonia. Even in favourable cases convalescence is slow, and visual disturbance, muscular weakness, and digestive disorders may persist for weeks. Treatment should consist in washing out the stomach thoroughly, for,

[1] *Manual of Bacteriology*, second edition, 1913.
[2] *Deut. med. Woch.*, xliii, 1531-1534; 1554-1556.

owing to the early onset of gastric paresis, the poisonous article of diet may remain in the stomach for several days after it has been swallowed. Tube feeding will be required for the palatal and pharyngeal paralysis. Thirst should be relieved by rectal or subcutaneous injections of saline.

The toxin corresponds closely, as regards relative instability, conditions of precipitation, and its readiness to combine with the cells of the brain and spinal cord, with the toxins of diphtheria and tetanus; and Kempner has prepared an antitoxin which has a neutralizing property *in vitro* and considerable therapeutic value when given some hours after the toxin in experimental animals. The antitoxin, it is said, is given preferably by intramuscular injection, but it appears to be difficult to make. From some experiments on animals made by Kobs it would appear that the botulinus toxin is rendered innocuous by the addition of diphtheria antitoxin, so that the use of the latter may be justifiable should the specific antitoxin not be obtainable.

With regard to prevention, it may safely be assumed that the thorough cooking of food—not only sausages, but brawn, chitterlings, trotters, ham, and similar articles—would obviate all risk.

THE PROFESSIONS AND THE EXCESS PROFITS DUTY.

IN the course of the Budget debate reference was made to the fact that the earnings of professional men were exempt from the excess profits duty, though in the case of the business man the whole of his profits were brought within the scope of the tax without any regard to the fact that in most cases some portion of that total profit was the result of his personal ability and exertion. More than one speaker suggested that this constituted a legitimate grievance which should be redressed by treating professional earnings as liable to duty in precisely the same way as business profits. The suggestion may be plausible, but does not seem likely to be supported by the Chancellor's official advisers if we may judge by the earlier debates dealing with this comparatively new though highly lucrative duty. At the same time it is desirable that any misapprehensions on the subject should be dispersed; we cannot imagine any intelligent observer considering the idea that the medical profession should be still further burdened as other than absurd, but even unintelligent criticism must sometimes be refuted. We are aware that the speakers in question probably had in mind professional accountants, who are said to have received heavy fees in connexion with their work in settlement of liabilities of their clients to the new Government levies, but one member at least referred to doctors as being fit subjects for assessment to the excess profits duty.

It should be remembered that when the duty was first publicly discussed it was popularly called the "war profits" tax—a name which was really more appropriate to the already existing munitions levy on establishments controlled by the Ministry of Munitions—and that misnomer perpetuated the misconception which it epitomized. Broadly regarded, the excess profits duty was intended to be, and is, a special levy on the enhanced profits of capital employed under war conditions. The two special factors operating to give rise to that enhancement are, first, the general and rapid rise in prices which has inflated the profits of practically every manufacturer or trader, not only by giving him a special, if temporary, profit on stocks in hand or bought in advance of need, but also by providing him with favourable and frequent opportunities for unnecessarily increasing his prices; and second, the extending activities of the Ministry of Munitions, which has widened the circle of profitable war work far beyond the area covered by the munitions levy. From the operation of these causes the medical profession has been entirely free. To take an illustration at random: a drapery establishment in the neighbourhood of a munition factory will probably make substantially increased profits, but the local medical practitioners will remain practically unaffected. And the reason is not far to seek. Such an establishment is an organized machine capable of coping with additional turnover without radical change, but merely with the addition of new staff, or possibly accommodation; but the "turnover" of a medical man is an index of his personal effort, and is not capable of similar extension.

Nor is this all. In dealing with a comparison of pre-war and present commercial profits, regard can be had to the increased rate of exhaustion of the plant and other business assets, which can be approximately measured and allowed for when the tax is computed; but who can express in terms of money the exhaustion of vigour, health, and brain power suffered, where the additional income represents a corresponding—and almost intolerable—drain on physical and mental assets? The exemption of the medical profession from this tax does not rest on any sentimental regard for the sacrifice which its members are making to the common cause both at home and abroad, but on the reasonable application of economic principles. It may be that these same principles would justify an allowance for the personal factor in business profits which the revenue authorities might find it impossible to carry into practice, but that fact should not prevent them from operating wherever their application is practicable.

Lastly, as our readers are no doubt aware, even if these principles were ignored and all medical incomes were closely scrutinized the annual exempt margins allowed over the pre-war standard of profit would prevent the Exchequer from receiving any duty which could be regarded as an equivalent return for the expenditure of time and labour involved in the investigation.

Members of the medical profession are, of course, liable to the super-tax, which now begins at incomes of £2,500 a year instead of £3,000, and is chargeable at higher rates than last year. The lowering of the limit of income subject to the extra tax will probably affect a not inconsiderable number of medical men.

THE MEDICAL SERVICE IN THE ZEEBRUGGE RAID.

THE graphic official narrative of the naval raid on Zeebrugge in the small hours of St. George's Day made no reference to the work of the medical service during the operations. The following short note may give some idea of the work of the surgeons and their staff in the raid. Staff Surgeon McCutcheon, who was in charge of the medical arrangements, had with him three medical officers in the *Vindictive*, the medical staff numbering twenty-nine in all, distributed in four parties. A considerable proportion of the subordinate staff belonged to non-combatant ratings specially trained for the raid, and included two non-combatant officers—a chaplain and an assistant paymaster—who both rendered valuable services. In the *Iris*, which carried the special landing unit of marines, there was one medical officer with a bearer party of sixteen marines, and six men of the sick berth rating. In the *Vindictive* there was also a party of nine stokers and seamen under

the charge of a medical officer, told off for such special duties as might arise. These got on to the Mole and did good work in collecting casualties and transferring them to the ship. Special arrangements had been made in the *Vindictive* for the reception of a large number of wounded, the medical officers and their staff being grouped in three stations—forward, aft, and amidships. Directly the boarding party was landed the port side of the mess deck was converted into a reception place for the wounded, and all available cabins and compartments were cleared for the purpose. More than 170 cases were treated in the *Vindictive;* most of the wounds were multiple and extensive, and there was much severe haemorrhage needing application of the tourniquet. The wounded were eight or nine hours on board, but first aid was all that was possible in most cases; this included the administration of morphine and saline injections, and the application of temporary dressings. Darkness and the artificial fog added much to the difficulties of collecting and transferring wounded on board ship. The Medical Department R.N. received notice that the attack had been made, and when the first batch of casualties was landed at the base in the morning naval ambulance trains were awaiting them at the ship's side. They were rapidly dispatched to various naval hospitals, and the last contingent of patients was comfortably settled in hospital by 6 p.m. The bulk of the wounded were sent to the Royal Naval Hospital at Chatham, where they were visited on April 30th by the King and Queen, who expressed high appreciation of the medical arrangements. Although there were a number of casualties among the stretcher-bearers of the Marine and special units, no medical officer received any injury.

CARE OF THE BLIND SOLDIER IN GERMANY.

THE German War Office has accepted a reduction of vision to $\frac{1}{25}$ as a definition of blindness. A rough estimate of the number of soldiers in Germany coming within this definition by the spring of 1917 was 2,000. The estimated number of the blind before the war was 40,000, so that the magnitude of the problem has not been very greatly increased, but some of the conditions have been altered. For example, before the war only 0.2 per cent. of the blind—that is, only 75 to 80—had had a university education, but among the soldiers blinded in the present war from 10 to 15 per cent. according to one estimate, and as many as 20 per cent. according to another, have received higher education. In order to discuss the problems thus raised, Professor Bielschowsky, in December, 1916, called a conference in Leipzig. The facilities in existence for the education of this minority were very inadequate. The central library for the blind in Hamburg, founded in 1900, had, indeed, by 1915 lent out 20,000 books, but it possessed practically no works in Greek, Latin, or Hebrew, nor any scientific works. The conference appointed a commission of six members to inquire into these and kindred matters; it also undertook to make a selection of standard works on various subjects, including the sciences, suitable for blind script. German and Austrian authorities in the various faculties appear to have settled this matter satisfactorily. Marburg has been selected as the centre for the blind of the educated classes on account of its central position in Germany, its university, the absence of crowded street traffic, and its facilities for cheap living. In the first academic term of 1917, this institution, which is only a few minutes' walk from the university, received seventeen pupils, whose education was undertaken by three blind university teachers. It has been calculated that the thirty-three schools and forty-three workshops already in existence will be capable of absorbing the blind soldiers of the uneducated classes. Private enterprise is to be discouraged, as homes for the blind soldier conducted at the expense of independent persons have been found to pamper instead of teach, and to be unnecessarily costly. The blind are kept in military hospitals till medical treatment is no longer necessary. They are then transferred for three months, still under army control, to schools for convalescents. The pension for the blind private is from 1,300 to 1,400 marks, and if he chooses to prolong his residence in the school he may do so at a charge of one mark a day. Massage as a means of livelihood for the blind has proved disappointing, as the German is said to distrust the blind masseur. As a rule one year is required to teach blind script and a simple handicraft such as basket-making. Many blind soldiers have returned to their former work—to baking, cigar-making, shoe-making, and even watch-making. About 20 per cent. of the blind soldiers were agricultural labourers; their return to work on the land has been successfully effected in many cases. Schemes have been formulated for diluting blind labour, but the aid of companions with good sight is a doubtful gain; the blind who are well equipped in body and mind are better served by the independence which a thorough education in a school for the blind offers. The training of dogs as leaders of the blind has also been taken up.[1]

AORTIC REFLUX DUE TO SHELL EXPLOSION.

THREE cases of traumatic aortic regurgitation in soldiers previously healthy, and especially free from evidence of syphilis or rheumatism, and noticed after having been blown up by shell or grenade explosions, have recently been reported. Usually in traumatic rupture of a cardiac valve there is sudden onset of severe distress, but in Cramer's[2] case, and in one of the two reported by Brossard and Heitz,[3] the symptoms did not supervene until eight and three days after the explosion. In these two cases the soldiers were blown up and fell on their backs, and the traumatic rupture is ascribable to this injury; whereas in the third case, reported by Brossard and Heitz, in which there was in addition immediate and severe nervous shell shock, the explanation adopted is that the sudden alteration in the atmospheric pressure produced by the explosion damaged the nervous system and at the same time ruptured the aortic valves. The sudden alteration of pressure caused by explosions has been known to rupture the lungs without external injury (Sencert), to cause haemorrhage into the central nervous system, and haematuria, and it seems reasonable to believe that similarly the aortic valves, which according to Barié are the most delicate of the cardiac valves, might thus be ruptured.

TREATMENT OF GONORRHOEA IN ANTIQUITY.

ALEX RENAUD in a recent Paris thesis gives some details of the ideas which prevailed as to the nature of gonorrhoea in the early days of medicine. Hippocrates, in the fifth century before Christ, believed that purulent discharge from the urethra depended on carnosities in the canal; Galen, in the second century of the Christian era, held that it was an involuntary emission of semen—hence the name "gonorrhoea" by which he called it. This was also the teaching of Coelius Aurelianus in the sixth century, and of Bernard Gordon in the thirteenth. In the ninth century the Arab physician Rhazes recommended an antiphlogistic therapy together with injections of honey water with decoction of quince seeds. To cicatrize the canal he injected white lead or antimony. Gordon advised bleeding, emesis, and red cerate. For retention he prescribed water baths, combined with the application of living or crushed bugs to the penis. In this he may have imitated the practice of Avicenna, who, to excite the flow of urine, introduced a louse into the patient's urethra. In the eleventh century Constantine the African recommended injections of woman's milk. In the fifteenth century Marcellus Cunanus used cow's, goat's, or woman's milk in the same way, with purging, diet and oil inunctions as adjuvants. As a preventive measure the school of

[1] *Klin. Monatsbl. f. Augenheilk.*, April-August, 1917.
[2] A. Cramer: *Arch. des mal. des coeur*, Paris, 1918, xi, 66-70.
[3] J. Brossard et J. Heitz: Ibid., 71-74.

Salerno recommended micturition immediately after coitus. In the thirteenth century William of Salicet advised washing out with water after suspicious intercourse, and his pupil Lanfranc used ablutions with equal parts of water and vinegar to which the patient's urine was sometimes added. John of Gaddesden is credited with the invention of the suspensory bandage; at the end of the fourteenth century the same device was used by Guy de Chauliac. For the treatment of the discharge he used injections of oil of scorpions or pigeon's droppings diluted in lye and strained. Like Avicenna and Gordon, he believed in the efficacy of lice and bugs applied to the meatus.

THE PREVENTION OF SUICIDE.

THE Registrar-General for England and Wales in his report for 1915 recorded a remarkable diminution in the number of male suicides. The rate per million living, which was 157 in the decennium ending 1910, and 151 in 1914, fell to 104 in 1915. In 1916 there was a slight rise, the rate being 111. Taking the group of males between 15 and 45, the mortality, which had fallen from 145 per million in 1914 to 102 in 1915, rose again in 1916 to 117. The rate for women also shows a fall, but the numbers are much smaller; the rate was 47 in the decennium ending 1910, 45 in 1914 and 1915, and 38 in 1916. The only age at which male suicides do not greatly outnumber female is 15 to 20, when the two sexes were in normal times about equal, but in the war years the number of female suicides was higher than that of males; this is to be accounted for by the diminution of the civilian male population. Among women the suicide rate at ages 20 to 55 showed a marked reduction on the 1901–1910 standard. Dr. Stevenson points out that it is noteworthy that this change should have accompanied such a period of stress as the women of the country passed through in 1916, and adds that it does not suggest that their moral has been in any way injured by their widespread employment upon work hitherto thought suitable only for men. For women beyond the working age the suicide rate has not fallen, whereas in the male sex the greatest reduction has occurred at the ages 45 to 65. The experience in both sexes seems to point to employment as an effective preventive of suicide, for except that there may have been possibly some increase of household duties, owing to the absence of younger members of the family, women over 55 have probably had little additional work thrown upon them, whereas there has been increased employment of men even at the higher ages. The fact that the reduction set in first and has been carried furthest in the male sex harmonizes with this hypothesis, for increase of employment began earlier for men than for women, and the demand for male labour has remained in excess of that for female. It is suggested that increased employment would operate in at least two ways: in the first place, it would provide an interest in life calculated to divert the mind from personal worries, and in the second place the opportunity of useful work at a living wage would suggest an alternative to suicide in cases in which loss of capital or of employment would otherwise lead to despair. The decrease in alcoholism may also have contributed to the general reduction in suicides, but it would not explain the change in age and sex distribution. It should be added that cases of attempted suicide coming to the knowledge of the police declined to an even greater extent than deaths from suicide. The frequency of suicide among men in military employment increased regularly with age, as amongst civilians; as the men were all subject to military conditions, which are similar for all, the progressive increase in mortality must be attributed to increasing innate tendency to suicide as age advances rather than to increasing difficulty of circumstances, to which it might in the light of purely civilian experience be attributed.

TWO BOARDS BETTER THAN ONE?

WE stated last week that the Ministry of National Service is now concerned in the discharge of men from the army, but that a cumbrous dual system is at present maintained. The procedure now in force appears to be that laid down in a recent circular letter issued by the War Office to general officers commanding at home. All soldiers sent to a discharge centre, whether for discharge or transfer to the Reserve, are in the first instance to be brought before a civilian medical board attached to the centre. Detailed instructions are given to the officer commanding the discharge centre, who in every case is the approving authority for discharge or transfer to the Reserve, and is responsible for producing to the board all the documents properly completed for each case. "The object of bringing the soldier before the civilian medical board is to ascertain whether he has been impaired or not in health since his entry into the service." The civilian board is accordingly instructed to answer this question, and also to recategorize the soldier. The procedure thereafter varies according to the finding of the civilian medical board. Special instructions are given for the disposal of a soldier the board is not able to recategorize. In this event the man and his documents are to be brought before a military board at the discharge centre, which will either recommend the soldier's discharge or, if it considers him unfit for any medical category required in the army, will recategorize him—which may be easier than it sounds. The documents then come again before the officer commanding the discharge centre, who will approve the soldier's discharge in accordance with the King's Regulations. Where a soldier has been sent to the centre not with a view to discharge from the army, but for the purpose of transfer to the Reserve, the procedure varies slightly in detail. Pending the issue of a new Army Council Instruction, all discharges from discharge centres and transfers to the Reserve are to be effected under the provisions of this War Office letter. A sidelight on the amount of clerical work thrown upon all concerned appears to be given by the statement that in the event of one civilian board being insufficient to give effect to the instructions contained in this letter, a wire is to be sent to the War Office stating how many more boards are needed.

INTERALLIED SCIENTIFIC FOOD COMMITTEE.

THE second meeting of the Interallied Scientific Food Committee was opened in Rome on April 30th by Signor Crespi, Italian Commissary-General of Food Supply. A Reuter's telegram states that, after welcoming the delegates, Signor Crespi explained Italy's requirements during and after the war, and described the legislation recently adopted there to restrict supply and consumption. Signor Crespi's welcome was acknowledged by Professor E. Gley (France), Professor R. H. Chittenden (U.S.A.), and Professor E. H. Starling (Great Britain). The first meeting of the committee, it may be remembered, was held in Paris from March 25th to March 29th. Many important questions relating to the minimum food requirements of man and to the production and distribution of food supplies were then discussed. It is hoped that the labours of the conference now sitting in Rome may result in early action. Italy is following the example of France in instituting meatless days. In France the new order, which comes into force on May 15th, forbids the sale of meat on three days a week—Wednesday, Thursday, and Friday—or the supply of meat dishes in any public place, whether hotel, restaurant, dining car, or club, on those days. The only exception is that the sale of horseflesh is permitted, but only in shops exclusively devoted to it. The abattoirs will be closed from Monday evening till Friday morning. The number of animals that may be killed is restricted to two-thirds of the average number in the weeks of March, 1918. In Italy the same days are selected to be meatless, but there

mutton, lamb, and goat's flesh may be sold on Wednesdays, and bacon and salt pork and offal of all kinds, but not sausages or trotters, on any day. The sale of fowls is limited to three days a week, and in hotels and restaurants no meat of any sort may be served on the three meatless days with the exception of offal and rabbit. In Rome the proportion of maize and rice in bread is to be increased during the next fortnight at least. The price of meat in Italy, as also of ham and bacon, is very high.

THE Allied Conference on the after-care of disabled sailors and soldiers will meet again in London at the end of this month. In connexion with it an exhibition will be arranged of appliances in use in the British and allied nations for the benefit of the maimed and disabled; it will include a considerable collection of such appliances used in military orthopaedic hospitals in this country.

SEVERAL cases of the disease presenting cerebral symptoms, generally believed to be botulism, are now under treatment in Guy's Hospital. Two of the physicians to the hospital will be pleased to demonstrate them to any medical practitioners who may care to visit the wards at 3.30 and 4 p.m. on Monday next, May 6th.

Medical Notes in Parliament.

The Budget.

THE salient features of the Budget were summarized in our last issue; it may be convenient to record here a few notes of the subsequent debate. As the Chancellor remarked towards the end of the discussion, the Budget was well received on the whole, though every increase in taxation was criticized with some force by one member or another. On many points opinions were almost, if not quite, unanimous, as, for example, that Mr. Bonar Law deserved hearty thanks for his clear statement and a personal tribute to his tenacious memory for facts and figures, that his proposals were on the whole reasonable enough, that the luxury tax was a difficult but desirable departure, that the country was anxious that Treasury activity should be concerned not only with raising money but also with discouraging avoidable extravagance, that there were difficult times ahead needing much financial acumen on the part of the Government and severe sacrifice on the part of all, and last—and perhaps not least—that the Chancellor would find his smaller taxes—the additional penny per cheque and the increased postal rates—the most difficult to get through.

One or two members—including Mr. McKenna, the ex-Chancellor—would have been willing to see the income tax still further increased to 6s. 8d., or even 7s. 6d.—at any rate, during the continuance of the war; and from the Labour benches came a plea for the increase of the rate of excess profits duty from 80 per cent. to 90 per cent. or 100 per cent.; the force of this plea was weakened, if not destroyed, by the arguments brought forward by Mr. Baldwin, Joint Secretary to the Treasury. The suggestion made in some quarters—as was the case last year—that this duty should be extended to professional as well as business incomes, is dealt with in a leading article this week. The addition to the income tax to be paid by farmers met with ungrudging support from some and opposition from others. Mr. Wiles made a legitimate debating point by quoting cases in which farmers had alleged large pre-war profits when claiming compensation from the Losses Commission—for example, on being displaced when an aerodrome was established. He suggested that although when it was a question of taxing profits a farmer kept no accounts, figures were usually available for compensation purposes. Generally the feeling was that farmers had no reason to complain, as in any case they could claim to pay on their profits instead of on the artificial basis of twice the amount of their rent if they felt aggrieved.

The raising of the income limit for relief in respect of children from £700 to £800 was appreciated, though that change has apparently been due rather to the exaggerated effect of the £700 limit last year, which barred both the £70 abatement as well as the £25 per child, than to any deliberate intention to extend the latter allowance. Mr. H. Samuel suggested, and the Government spokesman (Mr. Baldwin) accepted the suggestion, that there was a continuing tendency to put the income tax more upon a family than upon an individual basis, and that that principle will have to be taken into consideration by the Income Tax Committee to be set up at the conclusion of the war.

The Budget for 1918 does not affect medical men as such, though they come within the class of income-tax payers which is substantially affected by the new rates in force for incomes over £500 per annum. Those who are drawing pay as officers in the army or navy will join those members who expressed their pleasure that the Chancellor had left last year's special "service" rates of income tax to hold good for 1918.

Promotion in Royal Army Medical Corps.—Mr. Macpherson stated in answer to Sir William Collins, on April 29th, that seventeen officers in the Army Medical Service had been promoted to the rank of major-general during the last five months. Of these five were men who held world-wide reputations for scientific and professional work, and twelve were promoted for both professional and administrative work.

Medical Examinations for the Army.—Replying, on April 25th, to a question by Mr. Jowett as to the arrangement for newly enlisted men and volunteers at military dépôts, Mr. Macpherson said that the recruit was medically examined and graded before being handed over to the army by the Ministry of National Service. The subsequent examination at the reception dépôt (prior to posting) was merely for the purpose of detecting whether a man was suffering from an infectious disease.

Mesopotamia Campaign: Surgeon-General MacNeece exonerated.—Mr. Macpherson, in a written answer to a question by Sir Watson Cheyne on May 1st, said that the Army Council had received and considered a statement by Surgeon-General MacNeece on the findings of the Mesopotamia Commission in his case, and they had formed the opinion that no blame could be attached to him in regard to the manner in which he carried out his duties in connexion with the medical services during the campaign.

Temporary Medical Officers in France.—Mr. Watt asked, on May 1st, whether a memorandum had recently been sent to temporary medical officers in France, when yearly contracts were about to expire, stating that they would be required to renew their agreements unless their release were asked for by some public body, or by a medical practitioner, requiring their services at home. Mr. Macpherson replied that he was not aware of any memorandum of the nature suggested. A letter from the Ministry of National Service had been sent to all such officers requesting them to continue their services in the R.A.M.C. on the expiration of their contracts. The letter also stated that the privilege which had hitherto been accorded, that such officers might put before the Central Professional Committees any difficulties which individuals might have in continuing their services, would not be affected.

British Prisoners of War in Turkey.—Mr. Fitzalan Hope, on April 29th, said that the first thousand British invalided prisoners to be repatriated from Turkey will be chosen by the Turkish authorities without the formality of official medical inspection in order to save time. The further selection would be made by medical commissions composed of two Turkish doctors and one British prisoner doctor. The standard of disability for repatriation from Turkey under the agreement was the same as that in force with Germany for the purpose of transfer from that country for internment in Switzerland. The Netherlands Minister (Constantinople) had been requested to carry out the provisions of the Berne agreement as to the inspection of internment camps by his representatives.

MR. FORSTER has stated that the reduction made some time ago in the rations of sedentary troops had not been found successful and the subject was being further considered.

IN the new case installed in the Central Hall of the Natural History Museum, Cromwell Road, London, the subject of plant foods is dealt with. The several sections of the exhibit comprise cereals, bread, roots, and tubers and other "vegetables," nuts, the pulses, fresh fruits, beverages, and sugar and its substitutes. The plants most generally used in the United Kingdom for foodstuffs are shown by specimens, models, drawings, and diagrams. The values of some typical foods in energy and in building power are shown in a series of coloured diagrams, and comparison is easy, as all the diagrams are on the same scale and each colour has the same significance throughout.

THE WAR.

TREATMENT OF WOUNDS IN WAR.

(*Continued from p. 490.*)

THE following are further sections of the conclusions of the Inter-Allied Surgical Conference at Val-de-Grâce from March 11th to 16th.

II. TRENCH FOOT.

1. Trench foot is a pathological condition provoked by moist cold and complicated as a rule by secondary infection.

2. The disorder presents four stages, as follows: (1) Painful anaesthesia; (2) oedema; (3) phlyctenules; (4) sloughing. Three clinical forms may be described—(*a*) slight (85 to 90 per cent. of the cases), characterized by painful anaesthesia, oedema, and redness; (*b*) moderate (13 to 14 per cent.), characterized by phlyctenules and limited sloughs; (*c*) severe (1 per cent. on an average), characterized by extension of sloughing and the appearance of septicaemic complication. This form may produce serious mutilation or death.

3. Trench foot, especially the more serious forms, is not infrequently complicated by tetanus or gas gangrene, and relapses and recurrences may take place. Trench foot occurs almost exclusively in soldiers who live in the trenches, more particularly in certain trenches. Soldiers coming from hot countries, dark-skinned races particularly, are more frequently attacked than Europeans. (In Italy soldiers from the south have suffered more often than soldiers from the north.) Youth, hyperidrosis, and a previous attack are predisposing causes.

4. Blood stasis due to prolonged standing, to long immobility, and to a bad attitude (stooping), compression of the leg and interference with the venous circulation, particularly by puttees, and more especially remaining long in cold and damp (muddy and flooded ditches and shell holes), are the principal causes of trench foot.

5. Trench foot may be confused with true frost-bite and with chilblains. True frost-bite is characterized by sudden massive mortification of a part of a limb (the front of the foot, the whole foot, etc.); trench foot, on the contrary, is characterized by limited destruction (gangrenous patches on the dorsum of the foot, the sole, or the toes) and by progressive invasion of the tissues of the foot. Frost-bite is met with in severe dry cold, especially in mountainous regions. Trench foot occurs only in damp weather and at low altitudes (valleys, plains); it disappears in frost. Chilblains are characterized—at any rate, in their early stages—by very severe itching, whereas those forms of trench foot—that is to say, the slight forms—which are liable to be confused with chilblains produce painful anaesthesia without any itching. It has to be admitted, however, that sometimes the diagnosis between ulcerated chilblains and the ulcerated phlyctenules of trench foot may be doubtful.

6. The treatment of trench foot is preventive and curative. Preventive treatment energetically applied and supervised may be followed by the disappearance of cases of trench foot, or may at least render them very rare. The treatment includes (*a*) collective measures—hygiene and draining of the trenches, gratings, trench boots, dry warmed shelters, with, if necessary, frequent reliefs; and (*b*) individual preventive precautions taken daily (drying, cleansing and massage of the feet, change of socks in the shelters, supervision of puttees and of everything which can cause compression of the lower limbs). Belgian medical officers attribute the extreme rarity of cases of trench foot in their army to the disuse of puttees. The curative treatment of trench foot includes the following measures: (*a*) Slight cases; a warm foot bath should be taken every two or three days and the feet washed with boric camphor soap. A large moist boric camphor dressing should be applied to the foot every day. (*b*) Severe cases; when phlyctenules only are present they should be opened and touched with camphorated ether, and a moist boric camphor dressing applied. If there are sloughs the same treatment should be persistently applied. Sloughs should not be removed with the knife; they should only be scarified, without causing bleeding, so that the drugs used may act on the subjacent tissues. Spontaneous separation must be awaited, and complications carefully watched and thoroughly treated surgically and fully at their onset. The principle by which operation ought to be guided is that it should be late and confined to the rectification of stumps which are defective from a functional point of view. Amputation should be performed only in cases in which the surgeon's hand is forced by serious general complications. In every case preventive antitetanic treatment should be used (injection of antitetanic serum repeated every week until the wound is cicatrized).

III. THE TREATMENT OF WOUNDS OF THE PELVIS, AND OF THE BLADDER AND RECTUM IN PARTICULAR.

Of the Pelvis Alone. — The general principles are the same as for war wounds of soft and bony parts. Comminuted fractures of the ilium call in particular for large trephining. The removal of projectiles or bony fragments which are often driven into the psoas and iliacus muscles is particularly difficult, and must be carried out systematically.

Of the Bladder. — (*a*) Intraperitoneal wounds are amenable to laparotomy and suture; (*b*) extraperitoneal wounds, if suprapubic, should be treated by primary suture of the bladder. Wounds of the walls or base of the bladder inaccessible to operation do not entail immediate cystotomy as a matter of routine. Surgical treatment of the wound of entry and of its track will assure sufficient drainage. Later on tying in of a sound will favour the closing of the urinary fistula. Primary cystotomy should be reserved for wounds of the bladder with retention or progressive perivesical infiltration. Serious haematuria or the presence of a foreign body in the bladder justify early cystotomy. Secondary infection of the bladder calls for cystotomy with drainage.

Of the Rectum.—(*a*) Intraperitoneal wounds, like all other wounds of the intestine, are amenable to laparotomy with suture; (*b*) the majority of cases of extraperitoneal wounds should be treated by the laying open of the traumatic centre, followed by plugging of the rectal wound. An indispensable adjuvant to this treatment is to keep the bowels constipated. In rupture with extensive detachment the method of choice is free opening up, with, if necessary, posterior rectotomy. Primary colostomy is only exceptionally required.

Combined Wounds of Bladder and Rectum.—The greater number of cases will recover under surgical treatment of the extravesical tract of the projectile. Colostomy should be reserved for cases in which the communications between the bladder and rectum are very extensive. Primary cystotomy is often useless; the tying in of a sound, ventral decubitus, and micturition in the genu-pectoral position favour spontaneous closure of the vesico-rectal fistula.

(*To be continued.*)

CASUALTIES IN THE MEDICAL SERVICES.

ROYAL NAVY.

Missing.

Surgeon H. C. Broadhurst, R.N.
Surgeon W. A. McKerrow, R.N.

ARMY.

Killed in Action.

MAJOR J. S. WALLACE, M.C., R.A.M.C.(T.F.).

Major Joseph Stephen Wallace, whose death in action was recorded in our issue of April 20th, held a commission in the Territorial Force, and not a temporary commission as stated. He was gazetted to the 2/2nd Welsh Field Ambulance on December 25th, 1915, and received his captaincy on July 25th, 1916. He joined the 2/3rd London Field Ambulance on August 9th, 1916. His commanding officer writes that Major Wallace was an exceptionally brilliant bearer officer, always ready for any work, and absolutely regardless of himself. He was awarded the M.C. on July 26th, 1917, for brilliant services during the battle of Arras, and a bar to the M.C. on January 8th, 1918, for exceptional work during the battle of Cambrai. He was held in the highest esteem by every member of the mess, and his stretcher-bearers worshipped him. He met his death while gallantly going to try and find another officer who was reported missing.

CAPTAIN B. S. BROWNE, M.C., R.A.M.C.

Captain Bernard Score Browne, M.C., R.A.M.C., was killed in action on April 15th. He was the son of Colonel A. Walker Browne of Londonderry, and was educated at Edinburgh University, where he graduated M.B. and Ch.B. in 1908. He then went out to China, where he served as a medical missionary of the C.M.S., and also as surgeon to the Chinese Customs Service at Ningpo, and received the Chinese Order of the Dragon. He took a temporary commission as lieutenant in the R.A.M.C. on April 2nd, 1915, and was promoted to captain after a year's service. He got the Military Cross on November 4th, 1915.

Wounded.

Lieut.-Colonel A. C. Rankin, Canadian A.M.C.
Major W. T. Brown, M.C., R.A.M.C. (temporary).
Major T. W. Clarke, M.C., R.A.M.C.(S.R).
Major C. B. Davies, M.C., R.A.M.C. (temporary).
Major W. S. Garnett, Australian A.M.C.
Captain M. Avent, R.A.M.C.(S.R.).
Captain T. Bennett, R.A.M.C. (temporary).
Captain A. G. Cook, R.A.M.C. (temporary).
Captain R. Donald, R.A.M.C. (temporary).
Captain F. G. Foster, R.A.M.C.(S.R.).
Captain F. P. Freeman, M.C., R.A.M.C.(S.R.).
Captain M. R. Graham, Canadian A.M.C.
Captain C. H. Harbinson, R.A.M.C. (temporary).
Captain S. P. Hodkinson, R.A.M.C. (temporary).
Captain D. L. Kennedy, Canadian A.M.C.
Captain G. D. Latimer, R.A.M.C. (temporary).
Captain T. McEwen, M.C., R.A.M.C.(S.R.).
Captain H. G. Oliver, R.A.M.C. (temporary).
Captain A. R. Oram, R.A.M.C. (temporary).
Captain R. H. C. Pryn, R.A.M.C. (temporary).
Captain I. A. N. Scott, R.A.M.C. (temporary).
Captain J. Smith, R.A.M.C. (temporary).
Captain G. Steel, R.A.M.C. (temporary).
Captain R. I. Sullivan, M.C., R.A.M.C.(S.R.).
Captain W. A. Troup, M.C., R.A.M.C. (temporary).
Captain F. W. White R.A.M.C. (temporary).
Captain G. Wilson, Canadian A.M.C.

Missing.

Captain W. J. Isbister, M.C., R.A.M.C. (temporary).
Captain G. L. Jones, R.A.M.C.(S.R.).
Captain L. C. Maclean, D.S.O., R.A.M.C. (temporary).
Captain F. P. Smith, R.A.M.C. (temporary).
Lieutenant J. F. Hornsey, R.A.M.C. (temporary).
Lieutenant E. S. Phillips, R.A.M.C. (temporary).

Formerly reported Missing, now not Missing.

Captain E. J. Storer, R.A.M.C. (temporary).

Prisoners of War.

Captain A. G. Bisset, M.C., R.A.M.C. (temporary).
Captain P. B. Corbett, R.A.M.C.(S.R.).
Captain D. R. E. Roberts, R.A.M.C. (temporary).
Captain H. A. Sandiford, R.A.M.C.(T.F.).
Captain W. Warburton, R.A.M.C. (temporary).
Lieutenant O. Le F. Milburn, R.A.M.C. (temporary).

DEATHS OF SONS OF MEDICAL MEN.

Awdry, W. W., Lieutenant Wiltshire Regiment, eldest son of Dr. W. R. Awdry of Berkeley, Gloucestershire, died of wounds on April 14th, aged 22. He was educated at Sherborne, entered Sandhurst in 1915, got his commission in 1916, went to France soon after, was wounded at Thiepval, and returned to the front only fourteen days before his death.

Chamberlain, Arthur Beaumont Goddard Twyford, Lieutenant Royal Navy, only son of Dr. E. Twyford Chamberlain of Billinghurst, killed April 23rd, aged 28. He had seniority as lieutenant from June 26th, 1911.

Hamilton, Ronald Eric, Second Lieutenant Devonshire Regiment, younger son of Dr. E. A. Hamilton of Manea, Cambridgeshire, reported wounded and missing, now presumed killed, April 23rd, 1917, aged 20.

Kent, Percival Naylor, Lieutenant-Colonel Dragoon Guards, son of the late Dr. J. G. Kent of Kingston, died of appendicitis in a base hospital abroad, April 18th. He was born in 1870, got his first commission in 1894, and retired as captain in 1912, when he joined the reserve of officers. He became major in the Notts Yeomanry, Sherwood Rangers, on May 13th, 1914, and was promoted to lieutenant-colonel in 1917.

Lawson, James Burnett, Lieutenant (Cameronians) Scottish Rifles, youngest son of Dr. J. B. Lawson of Rothesay, killed in action March 27th, aged 21. He had completed his first year as a medical student and passed his first professional examination at Glasgow University. He was a member of the University O.T.C., and obtained his commission in August, 1915. He took part in the battles of the Somme in 1916, and was promoted lieutenant in October, 1916. He was acting captain at the Ypres battle on July 31st, 1917. He was expected to return to resume studies on April 24th.

Loudon, James Brugh, Lieutenant Scottish Rifles (Cameronians), son of Surgeon-Major Livingstone Loudon, killed April 15th, aged 21. His commission was dated March 17th, 1915.

Maclean, Harold Daniel, Royal Field Artillery, younger son of Dr. Maclean of Stonehouse, Lanark, killed April 12th, aged 20.

Murray, George Anthony, M.C., Captain Royal Field Artillery, son of Lieut.-Colonel C. F. K. Murray, M.D., President of the Medical Council of South Africa, and grandson of Sir John Molteno, died of wounds on April 5th, aged 24. He was educated at Bedales and at Trinity College, Cambridge, where he graduated B.A. in June, 1915. He received his commission on July 8th, 1915, went to France on September 18th, 1915, and had been at the front ever since, taking part in the battles of Ypres, the Somme, Arras, and Passchendaele. He received the M.C. on September 15th, 1916, was promoted to lieutenant early in 1917, and to acting captain in November, 1917.

Nolan, M. K., Second Lieutenant Australian Infantry, killed in the heavy fighting on the Somme at the end of March, was the elder son of the late Dr. H. Russell Nolan, formerly aural surgeon to the Royal Prince Alfred Hospital and lecturer on diseases of the nose and throat in the University of Sydney. Lieutenant Nolan was educated at Newington College, Sydney, and at the time of enlistment was studying law at the Sydney University.

Parkinson, George Robert, Flight Lieutenant Royal Navy, only son of the late Dr. Parkinson of Henley-on-Thames, killed flying on patrol, April 13th, aged 19.

Reid, Eric Archdall, Second Lieutenant Hampshire Regiment, only son of Dr. Archdall Reid of Southsea, killed March 28th, aged 19.

MEDICAL STUDENT.

Grant, Thomas F., Second Lieutenant Seaforth Highlanders only son of the late Thomas Grant of Banshrew, killed recently Before the war he was a medical student at Edinburgh University. He gained the Military Cross in 1917.

Dr. H. Edmondson (Burnley) informs us that the injury through a shell explosion received by his son, Second Lieutenant I. E. Edmondson, A.S.C., reported killed in our last issue, did not prove fatal, and that he is now making satisfactory progress towards recovery.

[We shall be indebted to relatives of those who are killed in action or die in the war for information which will enable us to make these notes as complete and accurate as possible.]

HONOURS.

THE following is a continuation from p. 492 of our last issue of the particulars of acts of conspicuous gallantry and devotion to duty for which the decorations announced in the BRITISH MEDICAL JOURNAL, December 22nd, 1917, p. 839, were conferred:

Military Cross.

Temporary Captain Everard Cecil Abraham, R.A.M.C.

When in charge of a bearer division during seven days' operations the rapid and efficient clearing of wounded from the field was largely due to his efforts. During a heavy gas shell bombardment he led his bearers through the barrage to rescue men affected by the gas.

Temporary Captain William Robert Addis, R.A.M.C.

He superintended the clearing of wounded from regimental aid posts while the whole area was being heavily shelled, and during the latter part of the period he was gassed, but remained at work until the relief was finished.

Captain Matthew Thomas Ascough, R.A.M.C.

He dressed wounded in the open for forty-eight hours, without sleep or rest, under heavy shell fire, after his shelter had been rendered untenable by four direct hits.

Lieutenant Robert Hector Baxter, N.Z.M.C.

He worked for three days at his regimental aid posts under continual exposure to shell and machine-gun fire.

Temporary Captain Arthur Cecil Barker Biggs, R.A.M.C.

He supervised the removal of the wounded under very heavy fire during two days' operations. It was due to his extraordinary energy that the battlefield was always kept clear of the wounded, in spite of very adverse conditions.

Temporary Captain George Alexander Birnie, R.A.M.C.

In going forward with two stretcher-bearers to form an advanced aid post he was wounded in the shoulder by a piece of shell, one of the stretcher-bearers being killed at the same time. He continued dressing the wounded in our most advanced line, and even penetrated the enemy line of posts in search of casualties, keeping at his work until relieved some eight hours later.

Temporary Lieutenant Charles Herbert Booth, R.A.M.C.

He tended the wounded in the open under continuous heavy shell fire. His skilful organizing of stretcher-bearers was undoubtedly the means of saving many lives.

Temporary Captain Robert Briffault, R.A.M.C.

He organized an aid post through which all casualties of the brigade and those of many other units of the division passed. He personally went up to the post and attended to men lying out in shell holes under very heavy fire. Although relieved, he actually went up beyond our forward posts to search for a wounded officer. Throughout the whole action he showed the utmost disregard for his personal safety.

Temporary Captain George Edwin Chissell, R.A.M.C.
He tended the wounded both of his own battalion and others and organized their evacuation. He worked continuously in the open for twenty-four hours under heavy shell and machine-gun fire. When the battalion was relieved he remained until the last man of his brigade had been taken away.

Temporary Captain Edward James Clark, R.A.M.C.
As medical officer to a battalion, though continuously under heavy shell fire, he moved about in the open attending to the wounded, and undoubtedly saved many lives.

Temporary Lieutenant Arthur Philip Draper, R.A.M.C.
He set a splendid example of courage and self-sacrifice in attending to the wounded during an action. He went forward and attended to the wounded in the open when heavy casualties had been caused among the stretcher-bearers, and by his gallant conduct undoubtedly saved several lives.

Temporary Captain Frederick Pearson Fisher, R.A.M.C.
On learning that the enemy had projected gas into one of our deep mine galleries, he descended to the bottom of the main shaft and established an aid post there. He then advanced with his party into the gassed area and rescued several miners. He remained at his post without relief for fourteen hours and saved many lives.

Temporary Captain Alistair Gordon Forbes, S.A.M.C.
After continuous dressing of thirty wounded he personally took a place in one of the squads of bearers under heavy fire of gas and other shells, and so stimulated his exhausted bearers to special efforts. Though suffering from mustard-gas poisoning, he remained at work until ordered back as a casualty two days later.

Captain Hartas Foxton, R.A.M.C.
When in charge of the collection of wounded he personally directed and visited all the regimental posts many times a day, often under heavy fire. By his energy he kept his bearers working, though exhausted, until the completion of the evacuation.

Captain Reginald Douglas Gawn, R.A.M.C.
He worked untiringly, attending to the wounded under heavy fire during an attack. He made several journeys over most difficult ground to reach wounded men who were lying out in the open, and showed splendid courage and gallantry throughout.

Captain Norman Bell Graham, R.A.M.C.(S.R.).
He worked unceasingly under very heavy shell fire, attending to the wounded of several units. He organized stretcher parties, and also went out himself to attend to the wounded. He set a splendid example of contempt of danger, and undoubtedly saved many lives.

Lieutenant Arthur Robert Hill, R.A.M.C.(S.R.).
He attended to the wounded during an attack in a very exposed position under heavy shell fire. He often moved about over the open, searching for the wounded and assisting to remove them. He showed great coolness and resource under the most difficult and dangerous conditions.

Captain William Baly Jepson, R.A.M.C.(S.R.).
When a shell had smashed in battalion head quarters, although severely shaken himself, he dug out his commanding officer and the adjutant, and attended to them. He continuously took stretcher-bearers to the front line in daylight through intense shell fire. He established a new forward dressing-station after the battalion had been relieved, and did not return till he had searched the whole front for wounded.

Captain Frederick William Lumsden, N.Z.M.C.
He dressed wounded in the open when the regimental aid post which was within 700 yards of the enemy "pill-boxes" and in full view of them, was still full of wounded left by the previous battalion. Casualties were inflicted even on the stretcher cases. Though exposed to this fire, he worked unremittingly for three days, with practically no sleep and very little food, until quite exhausted.

Captain Duncan Macfadyen, R.A.M.C.(S.R.).
He repeatedly went out to shell holes under heavy fire to dress the wounded and help bring them in. He attended to the wounded of another battalion in addition to those of his own. He showed splendid courage and self-sacrifice.

Captain John McGhie, N.Z.M.C.
When in charge of bearers time after time he took stretcher parties forward through heavy mud and enemy barrages to the regimental aid post, and did not stop till he was certain that all men lying out had been collected.

Captain James McKay, M.B., R.A.M.C.(S.R.).
He arranged the evacuation of stretcher cases from the front line, and continually dressed wounded, regardless of heavy shelling, in the open, owing to limited accommodation.

Captain Hugh Agnew Macmillan, R.A.M.C.
He passed some 600 cases through his regimental aid post, though it was heavily bombarded. His staff being much depleted, he had to treat the majority of cases himself.

Temporary Surgeon Richard Glyn Morgan, R.N.
When wounded he carried on his duties under very heavy shell and rifle fire. Even when wounded a second time he worked with the stretcher-bearers in the open for thirty-six hours, until all the ground had been cleared of wounded. It was largely owing to his wonderful example and great exertions that the ground was cleared so quickly.

Captain John Pinder, R.A.M.C.
He attended to wounded under continuous shell fire. During two days and nights he worked in a shell hole and sent back a large number of wounded men who would otherwise have died from exposure. He also went forward several times to the front line to attend to wounded men.

Temporary Captain Charles Leslie Grove Powell, R.A.M.C.
He carried on his work in the open under fire, though his advanced aid post was a special target for the enemy's artillery. He also visited the front line when it was being heavily shelled to attend to cases that could not be moved.

Lieutenant (temporary Captain) William Leonard Eliot Reynolds, R.A.M.C.
He worked continuously for twenty-four hours amongst the wounded. In addition to his work at the regimental aid post he went to the front line frequently, by day and night attending the wounded under heavy fire.

Captain Sydney Devenish Rhind, N.Z.M.C.
For three days and nights at his regimental aid post he repeatedly attended to men outside under heavy fire. He also organized parties of stretcher-bearers for their removal.

Captain William Jack Scade, R.A.M.C.
When there was a large number of wounded in the aid post and no stretcher-bearers were available, he went back a distance of over a mile through a very heavy barrage, brought back stretcher-bearers and removed all the wounded. On the following day he went up to the front line under snipers' fire and brought back several wounded men. His courage and initiative were the means of saving many lives.

Captain Samuel Llewellyn Serpell, N.Z.M.C.
He attended to the wounded at the regimental aid post under heavy fire. Although twice wounded, he went on with his work until ordered to hospital by his commanding officer.

Captain Charles Nixon Smith, R.A.M.C.
When in charge of the collection of casualties from the whole of the divisional front during active operations he worked unceasingly for seven days without adequate sleep or food, and it was largely owing to his personal influence that the exhausted bearers were able and anxious to remain at work for so long a time.

Captain Walter Leonard Smith, A.A.M.C.
While in charge of stretcher-bearers and posts he did magnificent work in attending to the wounded and organizing their removal, and by his fearlessness and determination set a splendid example to his stretcher-bearers.

Temporary Captain William Steadman, R.A.M.C.
He superintended the loading of wounded men on to the tramway, and assisted the stretcher-bearers, under heavy fire. He also repeatedly went in search of wounded, and was the means of bringing a large number to safety. Later, though gassed, he continued at duty.

Temporary Captain Frederick Naylor Stewart, R.A.M.C.
He attended to the wounded during an action with utter disregard of danger, working in the open most of the day under persistent shell fire. He was untiring in his efforts on behalf of the wounded, and showed splendid courage and determination.

Temporary Lieutenant (temporary Captain) Robert Ievers Sullivan, R.A.M.C.
He attended the wounded under heavy fire. He organized the stretcher-bearers, and for thirty-six hours searched in front of our outposts for wounded men, thereby saving many lives.

Temporary Captain Norman Charles Talbot, R.A.M.C.
On hearing that the batteries of the brigade were being heavily shelled he dashed forward and dressed and collected over twenty wounded men.

Captain Robert Fowler Walker, R.A.M.C.(S.R.).
He tended the wounded in the open after the aid post had become a target for the enemy's howitzers. He was severely wounded, but would not allow the bearers to remove him until he had given instructions to his N.C.O. and made all possible arrangements for the care and comfort of the wounded.

Temporary Captain Henry Currie Watson, R.A.M.C.
He worked continuously for three days at an advanced dressing station which was being constantly shelled. Although gassed he persisted in remaining at duty.

Temporary Lieutenant Robert Everard Whitting, R.A.M.C.
He attended to the wounded during an engagement continuously for forty hours, working most of the time in the open under heavy shell fire. His courage and devotion to duty undoubtedly saved a very large number of lives.

Temporary Captain Frederick Edward Saxby Willis, R.A.M.C.
He attended the wounded of his own and other units in advance of our front line and in forward positions which were fully exposed under heavy fire. It was largely due to his careful training and skilful arrangements that his bearers evacuated such a large proportion of the wounded of three units from the front area during the two days.

The honour of C.I.E. has been conferred upon Major (Brevet Lieut.-Colonel) Cecil M. Goodbody, D.S.O., I.M.S., Major (temporary Lieut.-Colonel) James G. G. Swan, I.M.S., and Major William D. H. Stevenson, I.M.S., in recognition of meritorious services in Mesopotamia under the command of the late Lieut.-General Sir Stanley Maude.

NOTES.

Shell Splinters in the Axillary Artery.

Patel, who in civil life is surgeon to the hospitals of Lyons, has recorded in *Paris médical* a case in which a fragment of shell was removed from the interior of the axillary artery. The man was struck on the right side of the thorax, a little below the nipple, and the projectile lodged in the corresponding axilla. There was slight tingling in the right arm; the right hand was weaker than the left and the pulse was smaller. An incision as for ligature of the axillary artery was made, the median nerve exposed and held back; the fragment of shell was not found in the periarterial cellular tissue but appeared to be embedded in the arterial wall. On cutting directly on to the foreign body it was found to be lying within the lumen of the vessel. It was removed. There was some haemorrhage and the artery was sutured with five stitches. Healing took place by first intention and the pulse became normal. Patel thinks the foreign body lodged first in the outer coat of the artery and was

gradually pushed into the interior by the force of the pulse beat or by pressure against the outer wall of the axilla. The process was made easy by the fact that there was a miniature aneurysm in course of development at the point of penetration and the vessel was thus weakened.

Venereal Diseases in the French Army.

The problem of prostitution in armies has always been a difficulty, and has been dealt with in different ways by commanding officers. The Duke of Alva had the female camp followers in the Netherlands regularly organized. The higher grade for the officers rode on horseback in fashionable attire, while the common women for the rank and file went on foot. On the other hand, Strozzi cast 800 prostitutes into a river at one fell swoop. In a Huguenot army in the sixteenth century soldiers were compelled to marry the women. In other campaigns soldiers and prostitutes were impartially flogged, pilloried, and put in the stocks. Women were made to "run the gauntlet" between two files of men who beat them as they passed, but none of these measures was of any use. In the eighteenth century Voltaire, in *L'Homme aux quarante écus*, attributed the dissemination of syphilis among the civil population to the troops, and suggested the institution of an international crusade for the suppression of the scourge. In a volume on the sexual pathology of the soldier which has lately appeared, Dr. Fiaux estimates that late in the eighteenth century two out of every three men in the French army were syphilitic. During the French Revolution three admissions to a hospital were considered to make a man "unworthy to serve his country." The necessity of prompt cure was recognized, and barracks and camps were flooded with so-called "specialists," who vaunted their nostrums. One Boyveau-La-Hauteur had a specific which he called "206." In Berlin, when under French rule, and in Paris at the same time, an attempt was made to regulate prostitution, and any breach of the ordinances was severely punished. In 1814 it was shown that in houses under police supervision only one woman in seven was infected, whereas among clandestine prostitutes the rate was one in four. The close of the Napoleonic wars brought some change, but the percentage of infection remained very high. In the middle of the nineteenth century the average incidence was 10 per cent., but in some places it was much higher. After the Franco-Prussian war the figures were better: in 1889 the ratio of infections fell to about 5 per cent., and in 1895 to 3.75. Syphilis showed the largest reduction; in 1911 the ratio was below 2.5 per cent. Gonorrhoea was reduced by one-half between 1880 and 1911. Before the war the troops were professional soldiers, while to-day there is a citizen army which sooner or later must be disbanded; it is feared in France that, unless drastic precautions are taken, the disease will be widely disseminated among the population.

Scotland.

The Chair of Materia Medica, Edinburgh.

Sir Thomas R. Fraser, who succeeded Sir Robert Christison as professor of materia medica in the University of Edinburgh in 1877, has tendered his resignation, to take effect at the end of the present financial year. He has been professor of clinical medicine also since 1878. Sir Thomas Fraser is physician to the King in Scotland. He graduated M.D.Edin. in 1862, and was President of the Royal College of Physicians of Edinburgh in 1900–1902.

Overcrowded Medical Classes.

At a meeting of the Glasgow University Court a letter was read from Professor Noel Paton, stating that an abnormal increase in the number of students was causing great pressure on the accommodation and teaching staff of the physiological department. The class had been conducted in three sections, and the strain upon the staff was very severe. He suggested that junior students should be excluded from the class in histology, but the question of providing more accommodation and an adequate staff would have to be faced in the near future. Principal Sir Donald MacAlister, who presided, stated that in the botany class there were 337 students, and in the anatomy class 480. It was further stated that the same condition of affairs did not exist in Edinburgh, the increase in Glasgow being much larger. The Principal acknowledged the manful way in which the reduced staff were working double and treble time. It was agreed to suggest to the senate that the practical course in histology should be suspended during the present summer session.

George Guthrie's Fund.

A sum in investments amounting to £21,044 has been given by Mrs. Lucy Wortham James, of St. James, Missouri, U.S.A., to form a "George Guthrie's Fund" in memory of Lieutenant George Watson Guthrie, R.A.M.C., who was killed in action at Beaucourt, France, on November 13th, 1916. The fund has been placed in the hands of trustees, and the income is to be used for educating and training for professional life or business the sons of Scottish officers, warrant officers, non-commissioned officers and men of the British navy and army who have served in the war, and who have either been killed in action, drowned, or died of wounds, accidents, or illness contracted in the course of active service, or who have been so disabled during such service as to be unable to give their sons such a position, education, and training as would otherwise have been possible. The trustees are to hold the fund until twenty-five years from the final cessation of hostilities. It is then to be handed over to the University Court of Edinburgh to found and endow post-graduate fellowships, to be known as "George Guthrie's Fellowships," to encourage research work in the laboratories of the University of Edinburgh in regard to the maintenance of health and the prevention of disease in children, priority being given to preventable conditions such as poliomyelitis or other diseases which may be of immediate importance.

A Ministry of Health.

The Council of the Royal Faculty of Physicians and Surgeons of Glasgow and a special committee of Fellows have recently considered the proposal to institute a Ministry of Health, and their report was submitted to a meeting of the Faculty on April 8th. After discussion, the following resolutions were approved:

1. That a Department of Government should be created to deal exclusively with matters pertaining to the national health.
2. That the administration of existing enactments, in so far as they deal with health, should be transferred to the proposed Department.
3. That this Department should be empowered to initiate any further legislation necessary in order to give full effect to Resolution No. 1.
4. That such Department should be presided over and be represented in Parliament by a Minister of Cabinet rank.
5. That the autonomy of the several parts of the United Kingdom should be conserved by the formation of a Board of Health for each.
6. That such Board should contain *inter alios* persons representative of both the preventive and curative aspects of medicine in all departments, and be competent to advise the Minister as to the adequacy of the public medical, nursing, and hospital services of the country.
7. That the said Board should be aided by an Advisory Committee composed in part of members of the medical profession in groups and numbers to be subsequently considered.

The Faculty unanimously held that in any proposed legislation respecting a Ministry of Health the universities and medical corporations in Scotland should be given ample time to consider such measure before it becomes a statute of the realm.

England and Wales.

Institutional Treatment of Discharged Soldiers.

At the meeting of the London Insurance Committee on April 25th it was stated that considerable difficulties were being experienced on account of the competing claims for sanatorium treatment of discharged soldiers and civilian males. The number of discharged soldiers now occupying beds under the Committee's arrangements for the treatment of tuberculosis if 150, and of civilian males 206, and the numbers on the waiting list are respectively 205 and 157. The sum available to the Committee this year for institutional accommodation, including a special grant estimated to amount to £10,000 for the discharged men, is approximately £50,000, which is sufficient to provide an average of 500 beds a week, of which beds 335 are for male patients. If discharged soldiers are consistently to be given preference over civilians (as the Insurance Commissioners have agreed with the Pensions Ministry), and also are to be given treatment for the period regarded as necessary by the Committee's medical adviser, the whole of the available accommodation for males will be occupied

by them, to the exclusion of civilian male patients. The special grant of £10 in respect of each discharged man is the only contribution from outside sources receivable in respect of the treatment afforded to this class, and does no more than pay for five or six weeks' treatment, whereas the average length of stay should be at least twelve weeks. The feeling was expressed that the cost of giving adequate treatment to discharged soldiers should not in the main fall upon funds contributed by or in respect of the civilian male population, to the almost total exclusion of those contributors. A letter was read from the Commissioners stating that the treatment of discharged soldiers must not be excluded from the Committee's scheme; the Committee was responsible for the arrangements in these cases as for other classes of the population who were eligible for benefit, but the Commissioners added that they hoped to be in a position to supplement existing funds by an Exchequer grant. The Committee proposes to send a deputation to the Commissioners in relation to sanatorium benefit arrangements generally.

Correspondence.

UNIVERSITY REPRESENTATION IN PARLIAMENT.

SIR,—In your issue of April 20th Dr. E. Rowland Fothergill takes exception to the formation of a political association in connexion with the combined English universities, though at the same time he somewhat inconsistently suggests that those who think like him should support a candidate who holds views similar to his, forgetting that any association supporting parliamentary candidates is of necessity a political association. His letter is inaccurate in certain particulars, as he must be aware from our reply to a postcard from him some weeks ago. Our committee is not self-constituted, but was elected at a meeting to which were invited all the graduates resident in London whose names and addresses could be found. In addition to those who accepted the invitation, a very much larger number wrote expressing approval of the proposed association.

Dr. Fothergill suggests that we are endeavouring to secure the election of a candidate who holds our views. This, of course, is obvious, and it would also be the purpose of the association which he suggests should be formed. As there are, however, to be two members, and not one, and as these are to be elected under proportional representation, there is no question of our trying to monopolize the representation of the seven universities. He indulges in the gratuitous assumption that our candidate will not be keen on social questions. In this we think he will prove to be wrong, though we would point out to him that many of the so-called "social reforms" merely aggravate the disease which they profess to cure.

In any event, we think it a *sine qua non* that the members who represent the seven universities should be graduates of one or more of them.

While our association has certain definite political objects, it also intends to interest itself in all appropriate educational matters.

Perhaps the best justification for our action lies in the fact that already more than twice as many graduates have expressed approval as there are members of the senates of the seven universities. We mention this because these are presumably the official bodies whom he suggests should wake up. We must protest against the proposal that these official bodies should take any part in the matter, particularly as most of the members thereof will not be electors in the division, being graduates of other universities.—We are, etc.,

W. M. ABBOT ANDERSON,
Chairman.
HERBERT G. WILLIAMS,
Honorary Secretary.
Combined Universities Conservative and Unionist Association.

130, Ashley Gardens, S.W.1,
April 27th.

THE MILITARY SERVICE ACT, 1918.

SIR,—There is no class in the community who have given their services more freely and ungrudgingly to the nation during these years of stress than the medical profession. Their reward is to be singled out for compulsory service to an age five years beyond anyone else—an invidious distinction in which Sir Watson Cheyne finds "an honour,"[1] but many of his professional brethren see rather a slight. I have yet to find the medical man here who approves it.

We have heard enough since the war began to convince us that the average general practitioner at home has been working harder than the average man with a commission, either at home or abroad. There are many men from 56 to 65, say, who are still vigorous and active; if the men below this age are largely absorbed into the army, as is suggested by the drift of the Act, these older men will be called upon to bear a very heavy additional strain.

At this stage, surely, the object of the authorities should be to take for the easier work and more regular hours of hospitals, etc., at home and base hospitals abroad, the oldest men fit for them rather than the youngest, and to leave for the severer test of endurance in depleted general practice those who are more active and have a greater reserve of energy.

If the War Office offered commissions for a limited period to those up to 60 or 65, I have no doubt they would have many applications from fit and capable practitioners; and fewer of these older men would break down than under the system which the Act foreshadows.—I am, etc.,

Edinburgh, April 23rd. R. A. LUNDIE.

P.S.—I am pleased to see a suggestion in the same direction in yesterday's JOURNAL, from an anonymous F.R.C.S.

April 28th.

SIR,—It may be practically futile at this date to say a word more on this question, but it may not, as things have not infrequently been changed or modified during the past three years. I have just learnt that in fixing the age limit the National Service Ministry consulted the English and Welsh war emergency committee, but not the Scottish. Considering the more than generous way in which Scotland has responded to the demands for medical and man service, it surely deserved better treatment than to be ignored. I strongly protest against this action of the National Service Ministry. It would have been wiser to have refrained altogether from fixing an age limit as applied to doctors, for obvious reasons. It has for long been my conviction that the best use has not been, and is not being, made of the medical man service at home and abroad. Great things were hoped for when the Commission appointed to investigate the medical service in France issued its report. Has that report been published?

I believe that a great many more men could be spared for home and foreign service, provided it is gone about in the right way. The only and proper way is by organization.

1. In cities and large towns bureaux should be established, whereby the attendance on the public could be equally distributed among those who are left without doing harm to any one in particular.
2. In one or two men districts the position should be left undisturbed. Substitution would be bad for doctors and public.
3. In populous districts greater use should be made of registered midwives for labour cases, thereby relieving many doctors of the hardship of loss of sleep.
4. Many men over 55 who are retired or semi-retired are perfectly able to undertake part-time service at home, thus relieving younger men for foreign service who at the present time are engaged in clerical work.
5. The public should be educated to expect war-time attendance, not peace attendance.

—I am, etc.,

Edinburgh, April 30th. MICHAEL DEWAR.

THE EXTRA MILEAGE GRANT.

SIR,—It seems to be little realized that the method of distributing this grant, agreed upon in consultation between the Insurance Commissioners and the Insurance Acts Committee, will result in a very large number of rural practitioners being ruled out of participation in the grant. For instance, in Shropshire, where every practitioner on the panel is a rural practitioner, probably 50 per cent. will receive nothing from the new grant, although every one of the doctors on the panel has incurred increased cost in travelling owing to war conditions. The following case is

[1] BRITISH MEDICAL JOURNAL, April 20th, p. 462.

one I can vouch for: A panel practice of 2,000, 1,200 of whom live more than one mile from a chemist, and up to seven and a half miles from the practitioner, who travels between 9,000 and 10,000 miles a year. This practitioner will not receive anything from the new or extra mileage grant because of the method of distribution which the Insurance Acts Committee agreed to as being equitable. As the mover of the only resolution dealing with this subject at the Conference of Panel Committees, I regret that my remarks were not more fully reported in the account published in the SUPPLEMENT of April 20th.—I am, etc.,

Newport, Salop, April 21st. THEO. MARTIN CUTHBERT.

Obituary.

J. MICHELL CLARKE, M.D.CANTAB., F.R.C.P.LOND.,

Physician to the Bristol General Hospital and Professor of Medicine in the University.

WE announced last week the death of Dr. J. Michell Clarke of Bristol; he had been ill for some time, and died at Looe, Cornwall, where he had gone for the benefit of his health. He was the son of the late Mr. W. Michell Clarke, surgeon to the Bristol General Hospital, and was 58 years of age. He was educated at Clifton, Caius College, Cambridge, Bristol, and St. Thomas's. He was for a time junior demonstrator of anatomy at Cambridge and afterwards house-physician to St. Thomas's Hospital. He graduated M.B.Camb. in 1885 and M.D. in 1892, became M.R.C.P. in 1887 and Fellow in 1896, and was elected a member of the Council of the College in 1917. His association with the Bristol General Hospital began early, and continued to the time of his death, when he was senior physician. He took a leading part in the establishment of the University of Bristol and its medical faculty, as related below by Dr. Parker. He had been lecturer on practical physiology, and became professor of pathology in the university, and afterwards of medicine, and the esteem in which he was held by his colleagues is shown by the fact that he was holding the office of pro-Vice-Chancellor at the time of his death.

Dr. Michell Clarke had given special attention to diseases of the nervous system. His Long Fox lecture at Bristol in 1910 was on cerebro-spinal syphilis, and his Bradshaw lecture before the Royal College of Physicians in 1915 was on nervous affections of the sixth and seventh decades of life. He was the author of a work on hysteria and neurasthenia published in 1905, and contributed a number of papers to *Brain* and to our columns, including a case of removal of an intrathecal tumour of the lumbar region of the spinal cord, followed by a remarkable degree of recovery. Dr. Michell Clarke, as Dr. Parker notes, was an active member of the British Medical Association. He was for many years honorary secretary of the Bath and Bristol Branch, and was afterwards its president. He was secretary of the Section of Medicine at the annual meeting in Bristol in 1894, vice-president of the Section of Pathology in 1903, and vice-president of the Section of Medicine in 1912. He was also president in 1909 of the Bristol Medico-Chirurgical Society.

We are indebted to Dr. GEORGE PARKER, his colleague at the General Hospital, for the following tribute to his character and attainments:

The death of Dr. J. Michell Clarke in the full vigour of his powers is an irreparable loss to his numerous friends, to his colleagues, and to the medical profession. In his life I look back on one of the finest characters I have ever met. From the day when, as old Cambridge students, we met trembling on the steps of the College of Surgeons (there was no Joint Board then) to the end of his days he was always the same able, kind-hearted man, with a boundless capacity for work, and a wonderful power of self-restraint and sound judgement.

From his earliest years he had made up his mind to excel in whatever he took up, whether it was science or golf, and to this he added an unwearied industry which made his life a fountain, ever pouring out a full stream of valuable work without a moment's loss. His fellow workers hardly realized the greatness of the output, for it came so regularly and quietly and with so little display of effort through his ceaseless devotion to his duties. As a scientific man he threw himself from the beginning of his career into the development of neurology, especially on the pathological side. His brilliant and careful work in this department has a permanent value in the great structure which has been raised during the last thirty years. To the last he took the keenest interest in the subject and found time for a steady output of papers and laboratory work of the highest order. But he had endless other duties. He had to take a large share in the changes which led to the Bristol Medical School becoming a faculty of the new university, and here, as in everything else, his clear judgement, his quiet determined energy, and his capacity for grasping a complicated problem were of enormous value.

For the British Medical Association, too, he did yeoman's work. How few consultants there are who have toiled year after year in carrying out the routine work of honorary secretary for a large Branch and the delicate and troublesome duties under an ethical committee in composing local disagreements; and again, in representing on the local Insurance Committee the needs of panel practitioners at a time when party feeling ran high; and finally, as a member of the Central and Local War Committees, in taking on the terribly responsible duty of deciding who could be spared to offer their lives and services. It is to the strain of all these duties in addition to his military functions as Lieutenant-Colonel R.A.M.C.(T.) when in charge of some 1,300 beds in the 2nd Southern General Hospital that we must ascribe the fatal breakdown.

His work at the Bristol General Hospital in Guinea Street, where his father had served before him, was marked by the same thoroughness, punctuality, and breadth of view. Both the lay committee and his colleagues constantly looked to him to grapple with difficulties and to compose differences. For thirty years he showed what excellent work could be done at a voluntary hospital, and his methodical and exact teaching was eagerly sought for by students, who cherish the deepest affection for his memory. He had a large and widely spread practice throughout the West of England, as his high character and scientific attainments were recognized on all hands.

I do not recollect his ever being drawn into an angry discussion. His uniform good temper and quiet determination always enabled him to state his side of a question with clearness and dignity, and an Aristotelian discretion and tact gave weight to his judgements. In his scanty leisure he ever found delight in the best literature, in the pages of Saint Beuve, or in some historical or philosophical writer. In his last illness he pressed upon me a review of McKenna's new work on Plotinus which had charmed him, and nothing gave him more delight than a discussion on such subjects. He bore up bravely under the loss of his second son, who was killed in action, but the strain of the war told upon his keen patriotic feelings. It is difficult to speak of the generous kindness and toil he gave to those in need around him, but it must suffice to say that few men of his time will be more regretted than our good colleague and friend.

HENRY MACNAUGHTON-JONES, M.D., M.CH., M.A.O., F.R.C.S.I. AND EDIN.

DR. HENRY MACNAUGHTON-JONES died on April 26th, at High Barnet, at the age of 73. He was the son of the late William Thomas Jones, M.D., of Cork. He received his education at Queen's College, Cork, where for ten years he was demonstrator and lecturer on anatomy, and subsequently professor of midwifery. He obtained the degrees of M.D. and M.Ch. of Queen's University of Ireland in 1864, the diplomas L.R.C.P.I. and L.A.H.Dubl. in 1865, and F.R.C.S.I. in 1870; in 1886 he was awarded the M.A.O. degree of the Royal University of Ireland (*honoris causa*). After a varied experience of Poor Law dispensary work in the city of Cork, he served for eleven years as physician to the Cork Fever Hospital. During this period of his career he founded the Cork Eye, Ear, and Throat Hospital, and some years later was largely concerned with the foundation of the Women and Children's Hospital, now the Victoria Hospital. Coming to London in 1883, Dr. Macnaughton-Jones devoted himself to obstetrical and gynaecological work, in which he took for many years a prominent position. Among the offices which he held were the presidency of the British Gynaecological

Society and the presidency and vice-presidency of the Obstetrical and Gynaecological Section of the Royal Society of Medicine. He was also an honorary member of the Obstetrical Societies of Leipzig, Munich, Belgium, and Rome, and he was honorary president of the International Obstetrical and Gynaecological Congresses held at Amsterdam, Rome, Paris, and Berlin, and president of the British Section at the Congress at Petrograd. Dr. Macnaughton-Jones was a ready writer and a fluent public speaker. His work on *Diseases of Women*, in two volumes, reached its ninth edition in 1904, and the *Handbook on Diseases of the Ear and Naso-pharynx* passed through six editions. He was one of the founders and an early president of the first Branch of the British Medical Association formed in Ireland. At the annual meeting at Bath, in 1878, he was vice-president of the Section of Obstetric Medicine, and he held the same office two years later at the Cambridge meeting. He was for long one of the leading spirits of the Irish Medical Schools' and Graduates' Association, of which he was thrice president.

BY the death of Dr. SEYMOUR H. MUNRO of Nantwich, at the age of 85, a fine example of the old school of country practitioners has passed away. He studied medicine at Edinburgh University, graduating M.D. in 1857, and took the L.R.C.S.E. diploma in the same year. Settling down in practice at Nantwich fifty-three years ago, his great energy and ability soon established his reputation and secured a large practice in the town and neighbourhood, whilst his kindliness endeared him to his patients. Outside his profession he threw himself into every phase of public life; every movement likely to promote the welfare of the community or the good of the individual had his whole-hearted support. A lover of country life, an expert judge of horses, he was a familiar figure in the show ground and the sale yard, and his horsemanship is now a tradition amongst the people. He was for many years a justice of peace of the county, and took an active part in all magisterial duties. He leaves a widow, a daughter, and six sons, of whom two are in the profession—Dr. J. D. Munro, who succeeds him, and Dr. Ronald Munro of Northenden. The funeral service bore striking testimony to the esteem and affection in which he was held and the grief felt at his death.

THE LATE MR. GUY ELLISTON.—Mr. George C. Franklin, M.B.E., who was president of the Association when the annual meeting was held in Leicester in 1905, desires to add to the appreciations of Mr. Elliston, published last week, an expression of his recognition of the excellence of the arrangements made by Mr. Elliston for the week's work in Leicester and of his management generally. His loss, Mr. Franklin adds, will be most keenly felt by every member of the British Medical Association who knew him.

The Services.

ROYAL NAVY.

Deputy Inspector-General R. Gavin Brown, R.N., has been awarded a Greenwich Hospital pension of £150 a year in the vacancy caused by the death of Deputy Inspector-General Stephen Sweetman.

INDIAN MEDICAL SERVICE.

Temporary Rules for Accelerated Promotion.

Pending the resumption of normal conditions, the following rules shall govern the claims of officers of the Indian Medical Service to accelerated promotion:

(i) (*a*) Officers under twelve years' service at outbreak of war: Those who qualified in part, and those on study leave or combined study leave, who were recalled to duty, shall receive accelerated promotion with pay and position.

(*b*) Officers who have completed twelve years' service and over at outbreak of war: Those who qualified in part, or who were recalled from study leave or combined study leave, shall receive accelerated promotion with advantages of position but without back pay; provided that in the opinion of the Director-General, Indian Medical Service, such officers produce satisfactory evidence of their intention to have qualified fully before the expiry of sixteen years' service.

(ii) In the case of all other officers, the period within which they are required to qualify for accelerated promotion (that is, while in the rank of captain or within four years of their promotion to the rank of major) shall be extended by a period equivalent to the duration of the war. Officers qualifying within the latter period shall receive exactly the same concessions as if they had qualified within the prescribed time.

Badges.

The introduction of a collar badge of the following description has been approved of for wear by officers of the Indian Medical Service with the service dress jacket in place of the departmental gorget patches which have been abolished:

Description.—An eight-pointed star encircled by a laurel wreath and surmounted by a Tudor crown. On the star, the garter and motto; within the garter, the rod of Aesculapius with a serpent entwined. Below the star, a scroll inscribed "Indian Medical Service."

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

AT a congregation, held on April 26th, the following medical degrees were conferred:

M.D.—H. F. Marris.*
M.B., B.C.—R. French.
B.C.—H. W. Hales.*

* Admitted by proxy.

UNIVERSITY OF GLASGOW.

THE degree of M.D. (with commendation) was conferred, on April 23rd, upon Margaret E. Robertson.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT an ordinary comitia on April 25th, when the President, Dr. Norman Moore, was in the chair, the following candidates were admitted as Members of the College:

Wm. John Hart, L.R.C.P.; Helen Ingleby, M.B.Lond., L.R.C.P.; George Carmichael Low, M.D.Edin.; Arthur Lisle Punch, M.B.Lond., L.R.C.P.; Walter Rupert Reynell, M.D.Oxf., L.R.C.P.; George Riddoch, M.D.Aberd.; Adam Niven Robertson, M.D.Edin.; Douglas Robert Chaplin Shepherd, M.B.Lond., L.R.C.P.; Eric Wordley, M.B.Camb., L.R.C.P.

The Censors Board recommended that the licence to practise be restored to Mr. Alfred Banks. Licences to practise physic were granted to 101 candidates who had passed the required examinations, having conformed to the by-laws and regulations. The following elections to the Fellowship of the College were made on the nomination of the Council:

Walter Broadbent, M.D.Camb.; Hugh James Moore Playfair, M.D.Lond.; Sydney Walter Curl, M.D.Camb.; Frederick Lucien Golla, M.D.Oxf.; Archibald Montague Henry Gray, M.D.Lond.; Harold Benjamin Day, M.D.Lond.; Alfred Ellington Stansfeld, M.D.Camb.; William Whiteman Carlton Topley, M.B.Camb.; Charles Hubert Bond, M.D.Edin.; Percy William Bassett-Smith, C.B.

Nominated by the Council under By-law LXXI, Regulation 3, and proposed to the College for election to the Fellowship:

Sir Walter Morley Fletcher, M.D.Camb., F.R.S.; Sir George Newman, K.C.B., M.D.Edin.

The President resigned the office of member of the Committee of Management, and appointed Dr. W. Hale White to succeed him. He informed the College of the names of the Fellows nominated to serve on the committee to consider the proposed Ministry of Health.

On the motion of Dr. H. Russell Andrews, it was resolved that a committee be appointed to consider questions arising out of the "twilight sleep" method.

On recommendations of the Committee of Management the Technical Institute, Newport, already recognized for instruction in chemistry and physics, was recognized for instruction in biology; Brighton College was added to the list of schools recognized in chemistry and physics; and the following universities were added to the list of universities whose graduates in medicine are admissible to the final examination of the Examining Board in England, under the conditions of paragraph IV, section 3, of the Regulations, namely: (*a*) Creighton University, Omaha; (*b*) Georgetown University, Washington; (*c*) the University of Maryland and College of Physicians and Surgeons, Baltimore.

IN 1915 Gorter and Ten Bokkel Huinink described a method for determining in advance if a given typhoid vaccine would prove protective for man. This consisted in finding that the vaccine would protect guinea-pigs against an intraperitoneal injection of typhoid bacilli that would be fatal to control animals, and was considered to be most satisfactory. But it assumes that what holds true for guinea-pigs can be applied to man, and Aldershoff (*Folia microbiologica*, Delft, 1917, v) has repeated the work on guinea-pigs and investigated its practical application by estimating the agglutinating and bactericidal powers of men inoculated with the vaccine. The object of his research was to find out if in man a vaccine that fulfils the guinea-pig test gives better results than one that fails completely or partially when thus tested; he concludes that the criterion set up by Gorter and Ten Bokkel Huinink cannot be relied on in practice.

Medical News.

THE next session of the General Medical Council will commence at 2 p.m. on Tuesday, May 28th.

MR. CHARLES J. HEATH, F.R.C.S., has been elected President of the Wildfowlers Association of Great Britain and Ireland.

THE annual general meeting of the London and Counties Medical Protection Society will be held at 32, Craven Street, Strand, W.C., on May 15th, at 4 p.m.

MR. CHARLES W. DEAN, F.R.C.S.Edin., surgeon to the Lancaster Royal Infirmary, has been appointed deputy coroner for Lancashire (Lancaster Division).

DR. W. HANDFIELD HASLETT, J.P., C.C., chairman of the South Middlesex Division of the British Medical Association, has been unanimously elected, for the fifth year in succession, chairman of the Sunbury-on-Thames Urban District Council.

SIR A. GRIFFITH-BOSCAWEN has stated that the Insurance Commissioners accept responsibility for cases of tuberculosis in an early stage, but not for those that are far advanced. The Pensions Ministry is making arrangements for the use of annexes to sanatoriums belonging to the Metropolitan Asylums Board in London.

THE Lord Roberts Memorial Fund (122, Brompton Road, S.W.) is giving permanent employment to nearly 1,200 disabled men at its workshops in London and the provinces. A special appeal is to be made in London in the week beginning May 20th for contributions to an extension fund.

THE "Earlsmead" Home of Recovery, Hornsey, providing 35 beds for the use of the Great Northern Central Hospital, was opened on April 30th by Lady Crosfield in the presence of the Mayor of Hornsey, Mr. H. J. Tennant, M.P., deputy chairman of the hospital, and others interested in its welfare, including the donor, Mr. Harrop.

THE Osiris prize of the value of £4,000 was founded for the recognition of the most important discovery or work in science, letters, arts, industries, or generally anything for the public benefit. The prize has been held in abeyance since the beginning of the war, but the Institute of France has decided to make an award this year.

THE report presented to the annual meeting of the Invalid Children's Aid Association stated that during last year 9,185 invalid children had been assisted, of whom 423 had been sent away to convalescence; 584 surgical appliances had been supplied and 211 children apprenticed and trained. Of the £30,707 raised, £7,526 had been collected from parents. Owing to the difficulty of obtaining accommodation at hospitals four new convalescent homes had been opened.

THE committee appointed last October, with Sir George Makins as chairman, to report on the organization and equipment of hospitals for British troops in India, has concluded its labours, but its report has not yet been published. We note, however, that in the Indian Budget for 1918-19 a vote of £200,000 is taken for the introduction of the station hospital system for India and improvements of hospitals.

IN consequence of the passing of the Military Service No. 2 Act, 1918, the Local Government Board and the Secretary for Scotland have issued new regulations which came into operation on May 2nd, 1918. Provisions have been inserted excepting disabled men who have been discharged, and who by reason of the Review of Exceptions Act (now repealed) or of pledges given by the Minister of National Service were not to be called up for service. The members of local tribunals in England and Wales are in future to be appointed by the Local Government Board, and the new regulations provide that the existing tribunals and their members shall be deemed to have been appointed by the Local Government Board. Considerable changes of details are made by the new regulations, the principal object being to accelerate the decisions of cases. The grounds on which exemption may be claimed remain as at present, but the need for men being greater than ever the standard must be stricter. Exemptions must not in future be granted for more than six months, except where the National Service representative otherwise agrees, or in the cases of certificates on the ground of ill health or infirmity or of conscientious objection. Special regulations will be issued relating to applications concerning qualified medical practitioners, and the regulations now issued do not apply to any such applications. It is not necessary for any qualified medical practitioner who wishes to claim exemption to take any action until the special regulations are issued.

Letters, Notes, and Answers.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

The address of the Central Medical War Committee for England and Wales is 429, Strand, London, W.C.2; that of the Reference Committee of the Royal Colleges in London is the Examination Hall, 8, Queen Square, Bloomsbury, W.C.1; and that of the Scottish Medical Service Emergency Committee is Royal College of Physicians, Edinburgh.

QUERIES AND ANSWERS.

C. T. S. wishes to hear of a substitute for glycerin for enemata.

HAY FEVER.

A CORRESPONDENT asks for advice as to some suitable substance with which to spray the nose in severe hay fever. Reference to Sir StClair Thomson's recent book on *Diseases of the Nose and Throat* shows that quinine in a spray (gr. j to ʒj) or ointment (gr. xxx to ʒj of vaseline) has been well reported on, and its employment is so easy that it is worth trying. Dr. Watson-Williams recommends that at the beginning of the hay fever season the nasal passages should receive one spraying with a solution of mercury biniodide (2 to 5 per cent.), the application being preceded by cocaine and followed by a hypodermic injection of morphine. Sir Andrew Clark recommended painting the nasal mucosa with the following: Glycerin of carbolic acid ʒj, quinine hydrochloride ʒj, mercury perchloride gr. ¼. Its use, which should be preceded by the application of cocaine, is often followed by considerable reaction. If necessary it may be repeated on the second to the fourth day, but not more than three applications are required. If any readers can make better suggestions we should be very glad to receive them.

LETTERS NOTES, ETC.

THE VALUE OF THE WASSERMANN TEST.

DR. A. S. LEYTON (Oxford) writes: A most remarkable factor in the discussion about the value of the so-called "Wassermann test" (it is a bad habit into which we have fallen to label these biological reactions with the names of the alleged inventors, often regardless of historical accuracy) is the unanimity with which the question has been begged, that because the complement deviation test is positive, therefore the case is one of syphilis. A more flagrant example of begging the question has rarely happened in scientific literature. We know much too little about the factors involved in the reaction to make such an assertion, and the result obtained by a positive reaction is in many cases quite as contradictory, from a clinical aspect, as it is in the case of a negative reaction. Personally, I do not regard the complement deviation test as any more pathognomonic than the agglutination test, and I think we should be as slow in diagnosing syphilis on account of a positive complement deviation test as we should in diagnosing typhoid on the result of a positive agglutination test.

DR. H. MILLER GALT, Pathologist, Stephen Ralli Memorial Laboratory, Royal Sussex County Hospital, Brighton, makes the following observations in the course of a letter on this subject: Perhaps the commonest error into which the practitioner falls when presented with the results of Wassermann tests is to assume that the results admit of no other interpretation than the words "positive" and "negative" imply. A negative Wassermann reaction does not necessarily prove syphilis absent any more than a positive result proves in all cases its presence. The positive or negative result is simply a link in the chain of evidence; and while its value is usually great, it may actually be misleading in a small proportion of cases. No pathologist claims 100 per cent. of results which are in accordance with the clinical evidence, but the 95 per cent. or so of such results form a most valuable help to diagnosis. The medical officer in charge of the venereal diseases clinic at this hospital informs me that he has never failed to obtain a positive Wassermann reaction where the case was clinically one of syphilitic sore. After discussing possible fallacies in the cases reported by Dr. J. S. Robertson, April 13th (p. 427), Dr. Galt concludes as follows: Certainly a negative Wassermann reaction in a patient as the result of treatment is of slight value as a sign of cure. How many such negative results should be obtained, and over what period, are points still undecided.

DR. JAMES S. ROBERTSON writes with reference to the case mentioned by him in his note on April 13th (p. 427), of the pregnant woman who complained of a small, painless, persistent, slowly-growing vulval "spot," that the pathologist consulted was attached to a large London general hospital; it

was he who, without visual examination, tried to assure her that the test would give the correct answer. I was only asked by a colleague to give the injection, and when I visited her she was in the secondary stage. The question of my ability need not necessarily have arisen, for all the cases had been previously diagnosed, except one, which others had missed. Had the diagnosis not been definite, I do not think I should have wished for a Wassermann test, for even Professor Beattie is not prepared to say that the test is infallible. He says it aids. It aids also to make an indefinite diagnosis more indefinite by its indefiniteness.

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND.

Subscriptions to the Second Appeal.

The following subscriptions to the Fund were received during the fortnight ending April 29th:

	£	s.	d.
Dr. T. G. Nasmyth ...	5	0	0
Dr. R. MacLelland ...	2	2	0
Dr. W. M. Cummins ...	1	1	0
Dr. Dora E. Allman ...	1	1	0
Dr. Wm. F. McKenna ...	1	1	0
Staff-Surgeon D. D. Turner, R.N.	2	2	0
Dr. F. S. Rhodes	1	1	0
Dr. Charles J. Evers ...	2	2	0
A. L. C.	5	0	0
Dr. J. H. W. Laing ...	1	1	0
Mr Arthur Crook ...	2	2	0
Dr. George Rice	1	1	0
Dr. H. E. Huntly	1	1	0
Dr. Ina L. McNeill ...	2	2	0
Mr. Francis Lett ...	1	0	0
Dr. Albert E. Nicholls ...	3	3	0
Dr. Philip Cloake ...	0	10	6
Dr. Josephine Coupland	0	10	0
Dr. W. M. D. Gallie ...	1	1	0
Dr. Leonard Grant ...	1	1	0
Dr. E. P. Hasluck ...	1	1	0
Dr. Wilfrid Glegg ...	1	1	0
Dr. J. Garrett	0	10	6
Dr. E. H. Sweet	2	2	0
Dr. T. B. Haig	1	1	0
Dr. G. Vernon Bull ...	1	10	0
Dr. Mary E. Jeremy ...	0	10	0
Dr. J. W. Hayward ...	0	10	0
Dr. J. W. Killen	1	1	0
Dr. S. Williams	1	1	0
Dr. Dudley d'A. Wright	5	0	0
Dr. J. Spencer Hall ...	1	1	0
Captain F. W. Joynes, R.A.M.C.	1	1	0
Dr. Arnold Scott	10	0	0
Dr. Fosbery...	1	0	0
Mr. Miles A. Wood ...	0	10	6
Anonymous...	6	0	0
Dr. J. Alfred Codd ...	2	2	0
Dr. Eric Evans	6	0	0
Dr. B. L. Compston ...	1	0	0
Dr. Richard T. Smith ...	1	1	0
Dr. William Blair ...	1	0	0
Dr. Helen Boyle	1	1	0
Dr Arthur deW. Snowden	5	0	0
Dr. Donald Macphail ...	1	1	0
Mrs. M. Scatchard ...	1	1	0
Dr. G. H. Johnson ...	2	2	0
Dr. James H. Harrison ...	1	1	0
Mr. Bennett May	1	1	0
Dr. Weldon C. Carter ...	0	10	6
Major J. Orton, R.A.M.C.	1	1	0
Dr. Robert Todd	1	1	0
Dr. Robert Jamieson ...	2	2	0
Dr. Colin Lindsey... ...	2	2	0
Mr. S. T. Irwin	2	2	0
Miss Phyllis Marriott ...	1	1	0
Dr. Charles H. Greenwood	1	1	0
Dr. A. W. German ...	2	2	0
Dr. Ernest Lewis Ward...	1	1	0
Dr. G. J. Dudley	1	1	0
Dr. C. H. Cattle	1	0	0
Dr. E. B. Sherlock ...	2	2	0
Dr. R. W. Gentles... ...	1	1	0
Dr. R. B. Wild	5	5	0
Dr. Rosa Dale	1	1	0
Dr. Mackenzie	1	1	0
Dr. W. S. Hart (monthly)	3	0	0
Dr. R. Percy Jones ...	3	3	0
Dr. A. H. Nicoll	1	1	0
Miss Euphan M. Maxwell, F.R.C.S.I....	1	1	0
Dr. W. K. Law	2	0	0
Dr. A. F. G. Spinks ...	0	10	6
Dr. W. H. Lamb	2	2	0
Dr. J. C. Eve	2	2	0
Professor J. M. Cleland...	3	3	0
Dr. J. Rowland Payne ...	0	10	6
Dr. H. M. Sylvester ...	1	1	0
Dr. Marion Stocks ...	1	1	0
Dr. E. M. Watkins ...	1	1	0
Dr. A. Courtauld	2	2	0
Dr. George Pernet ...	1	1	0
Dr. G. Fred Rogers ...	5	0	0
Dr. R. W. A. Bolan ...	2	2	0
Dr. J. Ferguson Weir ...	0	10	6
Dr. Howard S. Willson ...	1	1	0
Dr. Henry Halliday ...	2	2	0
Dr. A. Pottinger Eldred	1	1	0
Dr. J. R. Bell	5	5	0
Dr. H. E. Quick	2	2	0
Dr. Charles D. Muspratt	1	1	0
Dr. John Playfair ...	2	2	0
Dr. J. H. Jacob (for 12 months)	6	0	0
Dr. Alex. Hendry	1	0	0
Dr. J. N. McGill	0	10	0
Dr. J. P. Fennell	1	1	0
Dr. Bryan Densham ...	10	10	0
Dr. Gertrude Macfadyn	1	1	0
Dr. G. M. Macnamara ...	1	1	0
Dr. A. W. Tuxford ...	1	1	0
Dr. Victor Miller	2	2	0
Dr. Amy Robinson ...	2	2	0
Dr. W. B. Secretan ...	1	1	0
Dr. M. R. Gooding ...	2	2	0
Dr. J. Sephton Cooper ...	1	1	0
Dr. Olive B. Falk... ...	1	1	0
Dr. Wm. Henry White ...	5	5	0
Dr. A. C. Wilson	1	0	0
Dr. H. G. Lys	1	1	0
Dr. and Mrs. Maitland Ramsay	5	5	0
Dr. H. Richardson ...	1	1	0
Dr. Fred J. Burman ...	1	1	0
Dr. James H. Stowers ...	2	2	0
Dr. Margaret G. Thackrah...	0	10	0
Dr. J. C. Worthington ...	2	2	0
Dr. Henry Malet	1	1	0
Dr. Maria Sharp	2	0	0
Dr. W. M. Palmer ...	1	1	0
Dr. Horace Sworder ...	2	2	0
Sir Arthur Newsholme ...	5	5	0
Dr. Marianne Selkirk ...	2	2	0
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Dr. J. M. Randle	1	1	0
Dr. Margaret L. A. Boileau	5	0	0
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Dr. B. R. Johnston ...	1	0	0
Dr. W. Fraser Annand ...	2	2	0
Dr. J. R. Ross	0	10	0
Dr. J. G. Macaskie ...	1	1	0
Surgeon E. Lloyd, R.N....	2	2	0
Dr. James B. Kelso ...	0	10	0
Mr. John D. Malcolm ...	1	1	0
Dr. T. L. Kennish ...	2	2	0
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MEDICAL STUDENTS AND MILITARY SERVICE.

PERPLEXED writes: I am afraid, when the fact becomes generally known, as it undoubtedly will be, that the passing of the first medical examination releases a man from army service, that the entrance to our profession may become a shelter for slackers. The following case, however, I think deserves passing notice: Graded A 1, and called up at the age of 19, having just passed his first medical examination. Joining an O.T.C., he in due course obtained a commission. After receiving £50 kit allowance from a generous Government, and having completed twelve months' pleasant training in England, now, when the call for men is urgent and the age limit is being raised, he is released at the age of 20 in order to resume—should I say commence?—his medical studies, still holding his commission as second lieutenant and wearing khaki.

*** The matter appears to be governed by National Service Instruction No. 35 of 1918, dated March 5th, 1918, and entitled "Protection from Military Service of Medical Students." It provides *inter alia* that a medical student who at the date of the instruction was a full-time student of a recognized medical school and had passed his first professional examination in chemistry, physics, and biology (or botany and zoology) for his degree or licence, is not, subject to provisions in later paragraphs, to be called up, whatever his medical category or grade, so long as he remains a full-time medical student. One of these provisions is that he must pass his professional examination in anatomy and physiology within thirty-six months of the date of commencing his professional studies; another, that if he is delaying his qualification unnecessarily or otherwise not satisfactorily pursuing his medical studies, the case is to be referred to the Director of National Service for the region. A third proviso is that the student must, if requested, offer his services as a surgeon probationer in the navy. It is probable that in a case such as that quoted by our correspondent this call will come within eighteen months.

CO-OPERATION!

PUBLIC VACCINATOR writes: There is, I understand, a shortage of army doctors, and the co-operation of civilian doctors is requested. In January of this year, being public vaccinator, I vaccinated a prospective cadet with Government lymph in four places, all of which took, and presumably the marks remain. I then inoculated him with 1,000 and 2,000 million typhoid vaccine, keeping him in bed on one day on each occasion. He has joined up and is told "that the vaccination and inoculation of civilian doctors cannot be recognized, and he must be done again"!

LESIONS OF PERIPHERAL NERVES: ERRATUM.

IN the report of a paper read by Captain C. B. Alexander before the recent Neurological Congress at Alder Hey Hospital, which appeared in the JOURNAL of March 30th, two decimal points were omitted. In the table showing the relative frequency with which various peripheral nerves were involved (p. 381): Radial 25 per cent., and posterior interosseous 25 per cent. should both be 2.5 per cent.

LECTURES AND DISCUSSIONS.

THE course of public lectures on biological problems of to-day will be resumed at University College on Monday next at 5 p.m., when Major Martin Flack, R.A.M.C., will speak on the physiological aspects of flying. On the following Monday Dr. H. H. Vernon, of Oxford, will speak on industrial efficiency and fatigue. The fifth course of lectures on public health problems under war and after war conditions was resumed last Wednesday at the Royal Institute of Public Health (37, Russell Street, W.C.) by Sir James Cantlie, who spoke on ambulance work. Professor Bayliss will deal with accessory components of food on Wednesday, May 15th, at 4 p.m. At a meeting of the Royal Sanitary Institute, at Hereford, on May 10th, at 5 p.m., Dr. D. Gold, M.O.H. Herefordshire, will open a discussion on tuberculosis.

THE following appointment of certifying factory surgeon is vacant: Tunstall (Stafford).

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